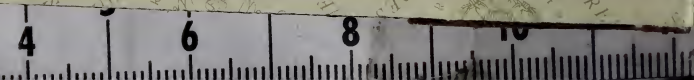
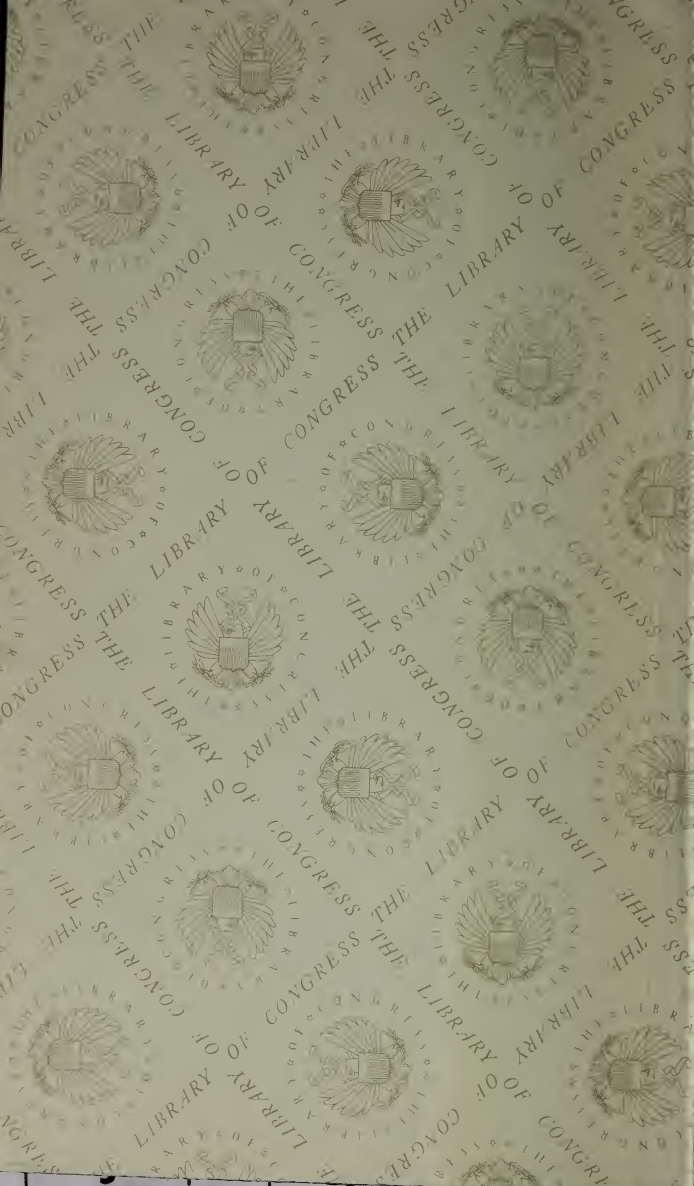
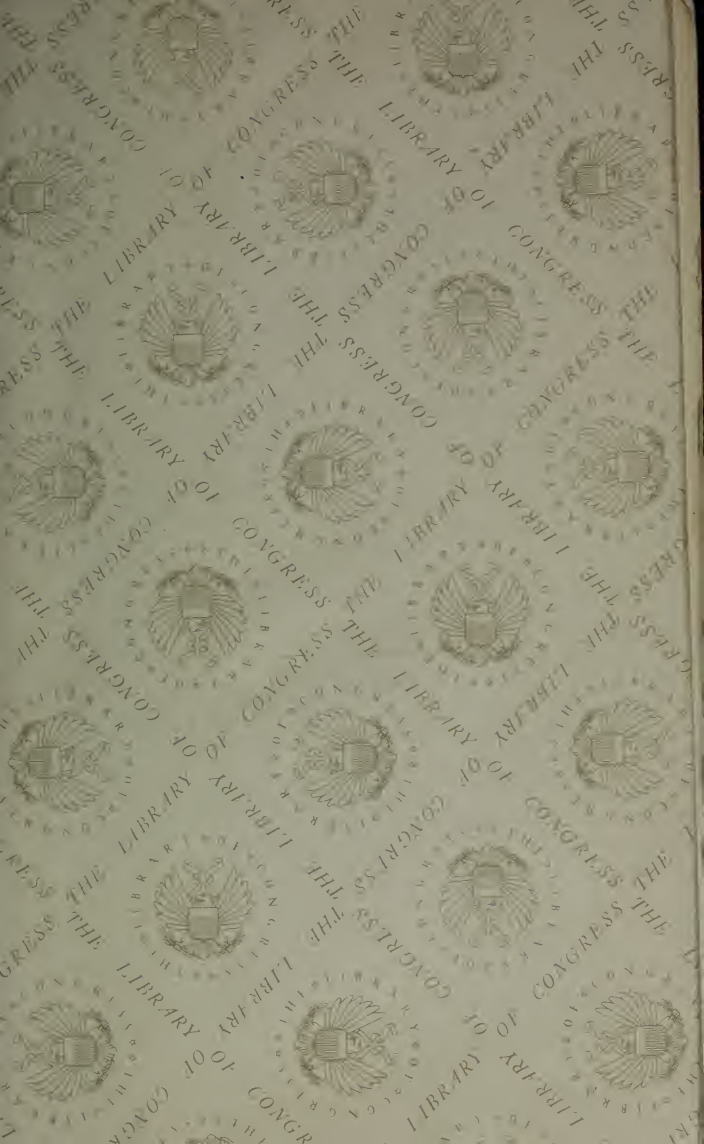
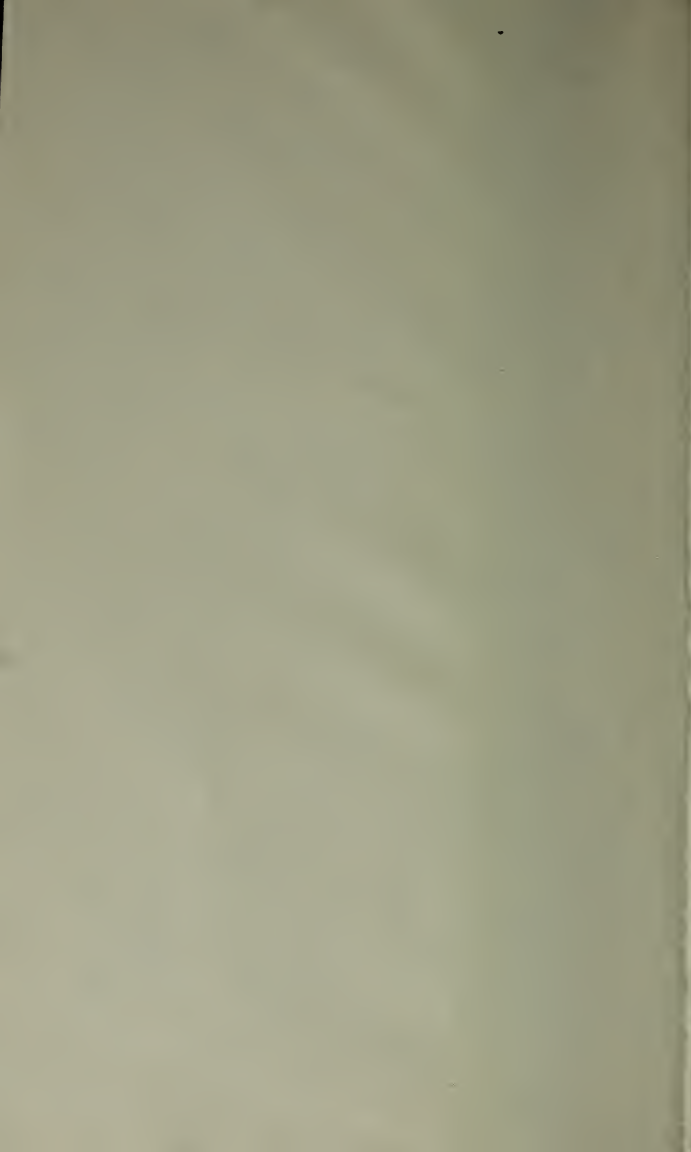
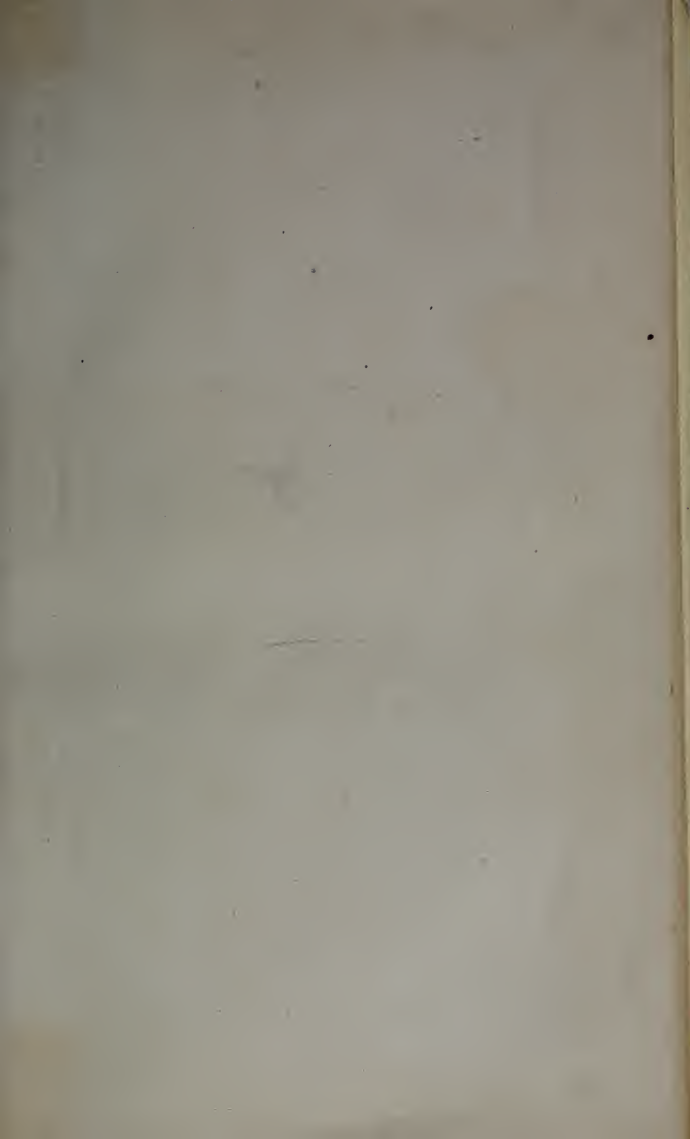


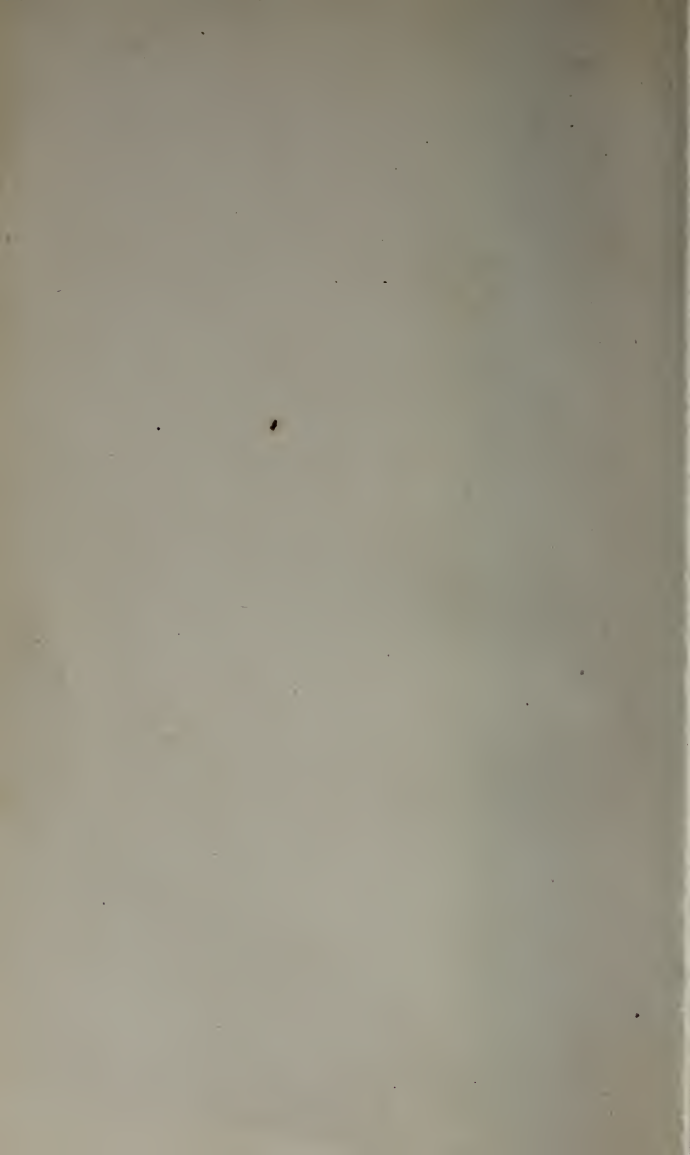
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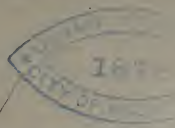
PERIODIC LAW.

BY

REV. GEO. A. LEAKIN, A. M.,

BALTIMORE.

“There is a confident expectation in the minds of men of the re-appearance in higher spheres of the same laws and relations which they have recognised in the lower; and thus that which is *like* is also likely or probable. Butler’s *Analogy* is just the unfolding (as he himself declares at the beginning) in one particular line of thought that the *like* is also the *likely*.”—TRENCH ON THE PARABLES.



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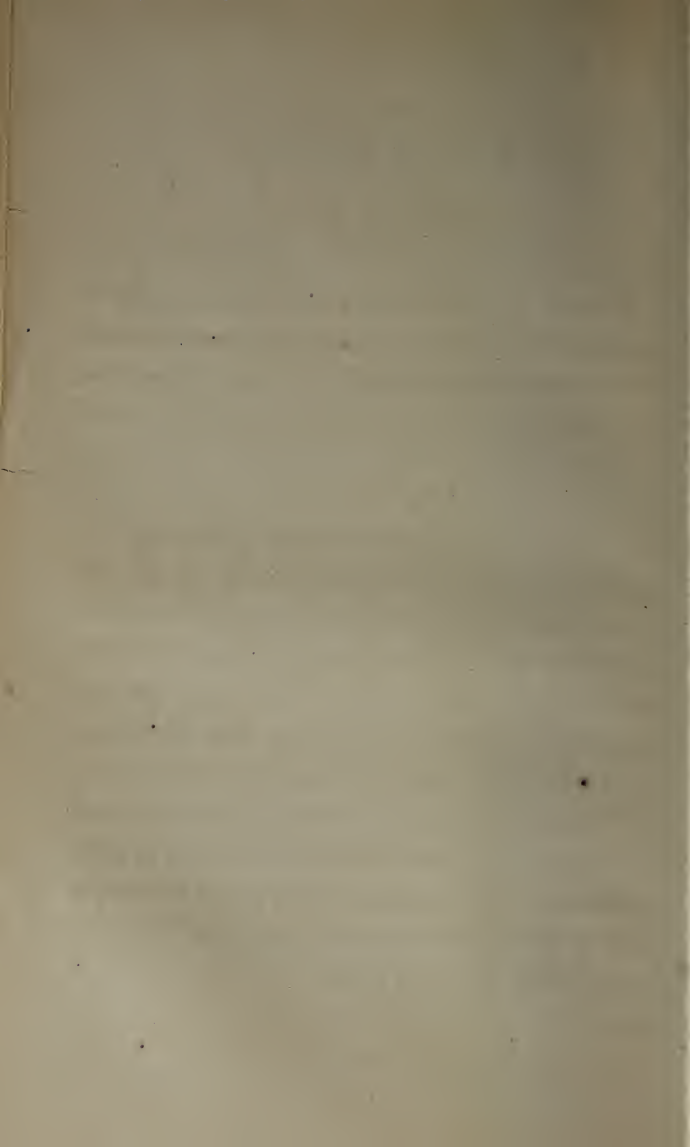
BY GEO. A. LEAKIN,

In the Clerk's Office of the District Court in the District of Maryland.

John W. Amerman, Printer, 47 Cedar-street, N. Y.

P R E F A C E .

THE author of this treatise, from many years of pastoral experience, has had opportunities of investigating the phases of mental emotions, and as his observations extended, he was led to suspect the same law of Periodicity as obtains in the world of nature. While Chaplain of a Hospital, he sought the aid of skillful Surgeons, whose testimony corroborated his own previously expressed views ; and he now submits his conclusions to the intelligent reader, and shall be glad to receive any similar investigations in a field comparatively unexplored. The value of this Periodic law will be apparent to the Physician, the Agriculturist, the Underwriter, the Teacher, the Minister, and to all interested in mental and moral progress ; and though he is unable to state all the practical bearings of this principle, he yet feels at liberty to suggest a realm of Thought more lasting than the Incas.



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CHAPTER I.

THE UNIVERSALITY OF THE PERIODIC LAW.

IN writing on this subject I am unable to present any recognised text-book as my authority, for after years of investigation I have found no special treatise on Periodicity. I have, however, discovered out-cropping hints and suggestions in Vico, Bishop Butler, Arthur Butler, Isaac Taylor, McCosh, Robertson, Spencer, D'Israeli, Esquirol, Gillie, Hallam, Guizot, Goethe, Neander, Whewell, Bulwer, Holmes and Emerson. But, every thoughtful person has some knowledge of this law, which, like the angel's visit, brings a message, and then disappears. Says an eminent physician, "The subject of the Periodic Law revives the impressions which I have received from time to time of the instrumentality of that law in the seasons; the periodical and destructive visitations of the elements; epidemics of disease, mental, moral and financial." The Physician discovers "a strange and inexplicable Periodicity in the physiological and patholo-

gical manifestations." The President of a law school writes, that though unable to present any authoritative treatise, he has yet traced this law in the study of history, and asks: "Does not Shakspeare express the same idea, 'There is a tide in the affairs of men?' " But, who would think of finding this scientific principle in a President's message? thus: "The law of demand and supply is as unerring as that which regulates the tides of the ocean; and indeed, currency, like the tides, has its ebbs and flows throughout the commercial world."

It is remarkable, that while such advances are made in physical science, while geographers explore Africa, so little is known of our own Thought kingdom. Science tames the electric spark; astronomers predict the returning comet; but who ventures to determine the laws of Thought? and yet the field is *within* us.

NATURAL OBJECTS TYPICAL.

Reflecting minds employ physical laws as ladders for higher truths. Each slighted object, like the prophet in the wilderness, points upwards; and should any plant or animal *seem* a failure, that failure is in the observer. Watch it, as Hugh Miller did the rock, and it con-

fesses an undeviating law. At first the earth was chaotic, but at each ascent, through different strata, design is more clear. Shall this order cease when we ascend from the natural to the spiritual?

MAN THE TRUE CHRONOMETER.

The more complicated the functions the more valuable the result. Observe the Polyp, and the increase of organs, until man, the highest, predominates. The vegetable and animal world unconsciously show the change of seasons, but *man* is the time-keeper: He first constructs the rude clepsydra, and then advances to the precise chronometer, and may construct an instrument still more delicate. Shall man impose the Periodic Law on the impassive metal, and *he* himself be exempt from its operation? The chronometer is typical of that Periodicity, which we know not now, but shall, through investigation, know hereafter.

DOES CHANCE EXIST?

Men have deified chance, and, like the gamester, risked all on her throw; but science has gradually substituted law for caprice, and ascertained cycles of loss and gain in hazardous games. Pestilence has lost its virulence.

In agriculture, finance, war and storms, and in great social questions, comparative certainty has been attained. But, in the realm of mind, chance seems impregnable. And shall this continue? There is no chance in the sparrow's fall, or in the wandering comet, and we anticipate a firmament of mind more beauteous than the starry splendor.

“The few who have wisdom and firmness to prosecute through life the great work of self-improvement will value hints of this kind, which, indeed, are disregarded only because we live from day to day by chance, and forget that life is as much an art, governed by its own laws, as the most complicated profession by which that life is maintained.”

IS THE NOVELTY OF TRUTH OBJECTIONABLE?

Does the slow progress or the obscurity of this law discourage us? Let past discoveries reply. Let the wild winds and storms answer. Science knows not the weather law; but science declares: “I shall see it, but not now; I shall behold it, but not nigh.” What if we shall anticipate mental disturbance as readily as the coming storm, and fortify a day of weakness by special vigilance?

CHAPTER II.

THE WEATHER'S CAPRICE.

THE uncertainty of the weather, though proverbial, is only apparent. Compare each day, week, month, season, with previous correspondents, and you will not call the weather capricious. The average temperature, the quantity of rain and snow, the fine and wet days, the gales of wind and thunder storms are almost exactly the same every year. There is the extreme cold of early January; the January thaw; the hot days at the end of February; the blustering winds of March; the light showers of April; the warm weather near the end of April; the cold first of May, followed by the long northeast storm, and then beautiful weather; the chilly first or second day of June; the intensely hot June days; the chilly beginning of July, and so on through the year. We can almost say that every marked circumstance of the weather occurs every year about the same time, and several successive Sundays are precisely alike. "He

measures the drops of rain as the dust of the balance, and each year has its allotted ration."

STORM SIGNALS.

"The establishment of storm signals in this country seems now to be certain. When a storm has commenced in a certain direction, the first telegraph station notifies all the other stations hundreds of miles in advance. Three guns are fired at each county seat announcing the storm. The interval between the first and second indicates the *kind* of storm. That between the second and third the *direction*. An interval between a third and fourth the *distance*; thus allowing a mile to a second, an interval of two minutes shows a distance of 120 miles, and then on our coasts these signals are repeated to notify the homeward bound vessels." Had such a system existed in America, our newly-acquired island might have experienced less disaster and our lost national vessels been spared. Had this system been *continued* by the English Admiralty, no less than four vessels, with many lives, might have escaped. [On the authority of General Sabine, the People's Magazine announces the resumption of the system.] Storm signals, like other improvements, suggest the inquiry, "Cannot the shriek of the

locomotive be more utilized?" At present the whistle says, "Stop; Start;" but there might be at least as much information given as by our fire alarms, and locomotives have "some words" without collisions.

INUNDATIONS.

Science defines the Mississippi River as running south to the Gulf, and then returning to its sources in a cycle of vapor—"The waters above the waters." Now, if by certain though partially discovered laws we may predict the coming storm, why not with equal facility anticipate a flood? Mitchell says that the bends of the Mississippi are struck with the precision of a compass, and boatmen estimate their progress not by miles but by bends. The swamp land of the Sacramento valley is said to overflow periodically, and I have reason to believe that the Susquehanna and Ohio have vast floods every eighteen or nineteen years. In the valley of Egypt, Nilometers recorded the river law for ages; but with us the science of fluviology has been overlooked, and yet its connection with meteorology is such that any fact discovered in the one must elucidate the other.

"Sir Samuel Baker, during his four years travel in Africa, has solved two great prob-

lems: The discovery of the source of the Nile and the cause of its annual inundation. A deficient overflow at once produces famine. The great famine in Joseph's time, which lasted seven years, was doubtless caused by a seven years' failure of the inundation; an occurrence to which there is an exact parallel in historical times. The inundation is caused by the addition to the constant stream of the periodical rains which fall upon the hill country of Abyssinia."

In building a bridge over the Great Miami River, time, labor and expense were greatly saved by telegraphic communications through the entire Miami basin, thus anticipating floods hours before they reached the bridge.

Might not this application of science be employed on *every* large river, thereby saving vast quantities of lumber and other valuables annually swept away?

Recently the water from Ottawa Lake, in Monroe County, Michigan, entirely disappeared. The *Coldwater Gazette* says: "The lake, or rather its bed or graveyard, presents a novel scene; some say the water will soon return by the same source of its departure—Lake Erie. About seven years ago Ottawa Lake

departed in the same way, and old residents say that this is a periodical recurrence.”

INTERNAL OSCILLATIONS.

There is reason to believe that internal disturbances of the earth are as periodic as external phenomena. In deep mining, from the hours of twelve at night until eight in the morning, water falls where none is seen during the day. The volume in the wheel is perceptibly increased, the atmosphere is charged with gases which prevent the lights burning, and small particles of earth and rock, as in the Chicago tunnel, are observed to fall from the tops of the drives. Whether this phenomenon is attributable to the diurnal motion of the earth or other causes, is worthy of consideration.

Similar to this is the disturbance of the Atlantic telegraph, whose electric pulse beats slowly or rapidly in certain recurring hours; and physicians remark that births and deaths are more frequent by night than by day.

CHAPTER III.

PERIODIC HARVEST FAILURES.

WHILE in a military hospital I had opportunities of investigating the phases of mental emotions, and I was led to suspect the Universality of the Periodic Law. This principle, deduced from a number of facts, threw increased light on the facts themselves, just as the ascending dew, condensed on the mountains, trickles down and clarifies the very lake whence it emanated, (a cycle for ages unknown,) or as the law of gravitation applied to the planets revealed a more exact system of longitudes, thus giving increased security to commerce. But that which particularly arrested my attention was a list in the Paris *Constitutionnelle* of the periods of scarcity in France during three centuries, deducing thereby a septennial failure, and concluding thus: "It is plainly owing to some law of nature yet *undiscovered* that these unfruitful seasons recur at comparatively regular periods." This undiscovered law was the very one then engaging my inves-

tigations, and I soon found similar facts, viz.: Four droughts in Montgomery County, Maryland, at intervals of sixteen years; in parts of Illinois a similar recurrence in seven years; in Delaware a change in the peach harvest in twenty years, and in Texas a general expectation of abundance among the old settlers every twenty years.

A farmer in the San Joaquin Valley writes to the Farmers' Club of New-York, "that in that region there are periodical seasons of drought, not of months but of years;" and his experience of California goes to show that the seasons of fertility and sterility come by periods of years.

Bayard Taylor thus writes: "The richer bottom lands of Thuringia have been cultivated with the interruptions of war for at least two thousand years; until recently, however, the system of farming was very primitive: shallow ploughing would soon have exhausted the land but for constant and generous manuring, and the relief which comes from rotation of crops. Some of the farmers reckon five and some seven years. In the latter case, the land lying one year fallow, as the proper cycle."

I further understood that there was a sep-

ennial failure in the East India cotton crop, and that our own Sea Island cotton was septennially devastated by the caterpillar, a fact paralleled by our seventeen year locusts. I might further suggest that the septennial fallow of the Jewish law may have been this very periodicity, written ages previously on the ground itself. The Department of Agriculture at Washington published these facts, calling the attention of our American farmers to seasons remarkable for droughts or rain, scanty or abundant harvests, and adding, that if such law be ascertained, "a valuable saving of time, labor and crops would result to the farmers and nation."

I have been surprised that in agricultural publications there is so little regard to general principles. Lord Bacon gathered all his agricultural books and burned them, because they contained only the empirical.

Closely allied with this law is the beautiful system of *compensation*, as, when a failure in Europe is marked by abundance here; or, "while the weather was so unfavorable for corn planting, it was highly favorable for wheat. During those wet, cold weeks, the wheat plant grew very slowly, and in protecting itself, it sent out new shoots, which

now are rising to sight, and adding to a stand which, by reason of the winter snows, was already good." Thus a cold climate, giving a slow growth and creating a self-protection, must, in a series of years, yield more wealth than a rapidly maturing climate. Thus the sower still goes out to sow.

INSURANCE.

Man is designed to be his brother's keeper, and the system of insurance against fire is based on annually recurring destruction—the application of the higher idea. While the uniformity of fires is well known, conflagrations wide-spread, startling and apparently abnormal, are subject to the same law. A century ago an English clergyman extended insurance from property to life, and from the apparent chaos of mortality deduced a law so reliable, that millions repose under its shelter; and more recently another advance includes *all* accidents, and doubtless should wars continue, a small reservation from the soldier's pay would furnish an income in case of wounds or death more beneficial than the precarious bounty. But is this principle exhausted? A time is near when the harvests of grain and

crops of fruit shall be insured to the farmer and planter against all accidents of the weather.

I have since been informed that there are such societies in England; and a bill before Congress proposes that insurance be effected on naval officers, by such a deduction of salary as mentioned above, and which, in behalf of soldiers, I ventured to recommend to the Secretary of War in 1865.

I was told by an officer of an extensive railroad, that accidents were singularly concurrent. For a long time there is an exemption, and then disasters accumulate in a week; and what is more singular, they run into types—collisions, explosions, bridges—precisely as the prevailing epidemics of disease or crime. On the British roads, during four years, the number of killed was respectively 216, 184, 222, 221. With such uniformity in accidents, and even in earthquakes, (according to M. Alexis Perry,) is it wonderful that insurance against accidents has become popular? And if law comprehends such abnormal events, what can escape its control? and can the insurance principle stop until it merges in that great moral association which protects all fulfilling its conditions?

THE SCIENCE OF INSURANCE.

The process of discovery is nearly the same in every department of nature. The perturbation of one planet led Le Verrier to suspect another, and consequent investigations disclosed the locality of the mysterious stranger. Thus the best actuaries account for clustering accidents and conflagrations by some unknown law, which the New-York State Superintendent traces in fires the most devastating; and the most advanced educators attribute the unaccountable vivacity and depression of classes to some undeveloped Periodicity—a law, which though not absolutely new, becomes relatively so by scientific advances.

Before investigation, nothing seemed more abnormal than disasters by sea and railway; and yet as the amount of rain in any given year is almost the same with the general average, so the amount of marine losses is equally uniform, and thus with conflagrations apparently abnormal. Says the *Insurance Monitor*, “The extensive fires occurring in Troy and Quebec, have sternly impressed on us the fact that epidemic periods have not passed away, but are as likely to occur in the future as in the past, and suggest whether

there be not *some law* governing and controlling, not only these disastrous recurrences, but also the great average of losses in ordinary business." These facts are indications of that new and beautiful law; and just as the explorer found a continent by the premonitions of strange birds and waifs of unknown wood, so by the collection of these facts, life's rugged ocean becomes a highway.

M. Quetelet declares, "that in every thing which concerns crime, the same numbers occur with a constancy that cannot be mistaken; and this even with those crimes which seem quite independent of human foresight, as murders, which are generally committed after quarrels apparently casual. Nevertheless, we know from experience, that there is the same number of murders annually, and that the very instruments employed are in the same proportion." Later inquiries develop the extraordinary fact, that the recurrence of crime can be more clearly predicted than the physical laws of disease and destruction of our bodies. Thus the number accused in France, from 1826 to 1844, was by a singular coincidence about equal to the male deaths that took place in Paris during the same period; only, the fluctuations in crime were *smaller* than

those of mortality, and each separate offence obeyed the same law of periodic repetition.

THE LAW OF ACCIDENTS.

“ Accident Insurance, whether applied to loss of life or personal injury, rests on the same basis as Life Insurance. It is uncertain to the individual, but certain as to the mass. Nothing could be more uncertain than the selection of a single death by drowning within twelve months ; and yet it is certain that in France 3,700 persons will from that cause and in that time lose their lives.

“ The statistics of England, France, Germany and the United States prove, that to every person accidentally killed, 70 receive disabilities averaging 20 days. Such observations determine the rates covering the hazard ; for, as \$650 insured as compensation for personal injury, is to \$5,000 insured against accidental death, so these sums are to the premiums charged, assuming that the losses by accidental death and personal injury will be equal. Witness the operation of these laws in the TRAVELERS :

1867.	Jan. 1.	Losses from personal injury,	\$201,785	12
“	“	“	“	“
“	“	accidental death,	195,990	00
1868.	“	“	“	“
“	“	personal injury,	372,882	32
“	“	“	“	“
“	“	accidental death,	371,225	00

Could any law be more clearly proven by results? Doubtless, a more complete classification of various risks will discover "truths of immense social and political importance."

THE MORAL OF INSURANCE.

Insurance is most immediately connected with this life, but, like the bow of promise, it embraces and illustrates the life immortal. The preparation for a limited future intensifies and brings nearer the eternal. Show us a land where revelation is not received and there insurance is unknown, and wherever a future life is most realized, there this principle most permeates the community.

The kingdom of God is a universal assurance, and if its members perform the conditions they shall be compensated. Nor is this merely the promise of the future; it is the realization of the present. Behold the Pentecostal establishment of this Society. The abundance of the rich compensated the poor—no man lacked; and St. Paul compares the Church to the "whole body, which fitly joined together and compacted by that which every joint supplieth, according to the effectual working in the measure of every part, maketh increase of the body to the edifying of itself in

love." Every discovery of man has been long anticipated by God. The spider may enter a caveat against the assumed invention of the balloon—the life-preserving projectile and the finest silk loom. The improvement in lenses came from the study of the human eye; the foundation of the Eddystone light-house originated from the root of a tree; the heating process by iron conduits is the Gulf Stream in miniature; photography approximates the image on the retina, and so the discovery of Life Insurance was the faint reflection of God's great insurance law. Since then it has advanced from fire to life, from life to accidents, and who can tell its limitation? Insurance is an advance from the material to the moral, or rather changes the material into the moral, and each new advance more fully assures those who seek *first* God's kingdom and His righteousness.

The word *Insure* is not found in the New Testament, but the idea abounds. "God will judge the world by Christ Jesus, wherefore he hath given *assurance* unto all men in that he hath raised him from the dead." Assurance, in the Greek, signifies faith, from which we infer that faith means not merely trust in a personal Saviour, but the assurance of a king-

dom ; and as the day star ushers in the sun rays, so does insurance declare His kingdom in our very midst.

Conformably with these truths are the words of Dean Trench : “ The earthly relationship is but a lower form of the heavenly, on which it rests, and of which it is the utterance.” The Parables called attention to spiritual facts which underlie all processes of nature, all *institutions* of society, and which, though unseen, are the ground and support of these processes and *institutions*.

CHAPTER IV.

THE SCIENCE OF PUBLICATION.

THE universality of this law suggests a new subject, viz. : the Science of Publication.

From feeble beginnings the Periodic issues of the Press have reached an importance demanding the recognition of science. The press has become a department of government, and investigation into this, as in other fields, will discover a regular ebb and flow in subscriptions and advertisements. The intelligent Editor will appreciate the substitution of certain law for the caprice of chance.

MEDICAL SCIENCE.

A distinguished physician, in the *British and Foreign Medical Review*, thus writes : "Experience shows that the physician and his remedy are useful only when they act in accordance with the laws of the constitution and the intentions of nature ; hence, in chronic, and even in acute diseases, the most effective part of the treatment is generally the hygienic—

placing the organs under the most favorable circumstances for the adequate exercise of their respective functions. There are forms of disease in which a determinate nature and course cannot easily be traced ; but there are many others in which the natural course is as obvious as the sun. Take the familiar example of cow-pox, small-pox, fever or ague. The disease is regulated by fixed laws, so clearly that any medical book describes accurately the symptoms on given days of its progress. So with measles, scarlatina and many other acute affections, and less clearly, but perceptibly, with gout, rheumatism and inflammation. All of these go through a regular course in a shorter or longer time, and when every thing thus regularly proceeds, the constitution is safer than when some unusual accident has interrupted the natural progress. The Creator has perfected all the arrangements for the cure, and our sole business should be to give those arrangements full play. Every one knows that a severe cold will run through a course of increase, maturity and decline ; even a common boil runs through its regular stages, and if we apply to one stage the remedy belonging to another, the result is injurious. Instead of trying to cut short pleurisy, the moment we

learn its existence we must respect its natural direction, and reserve our means to carry it through the regular stages.

“Thus must cures be more numerous and complete. But the public must cease to tempt their medical attendant to have ‘something done;’ they must wait patiently, to see nature, with the proper negative and positive medical skill, regain her healthy action.”

THE TYPE OF DISEASE.

The *Pall Mall Gazette* calls attention to a remarkable fact, stated by Dr. F. J. Brown, of Rochester, (England :) “Formerly the peasants were bled once or twice a year, losing sixteen ounces, and walking home without inconvenience. Of late years the same men and their sons have fainted from the loss of from four to eight ounces, and so the practice has been dropped.” Dr. B., who seems to be a very careful observer, thinks that a change of type is periodic. Since the spring of 1862, the plethoric type is gaining on the nervous; “Men can lose blood now who could not a few years ago.” “The nervous type,” he asserts, “came in with the first cholera epidemic, and has lasted about the third of a century. If the nervous type disappears, we may

hope that cholera will go with it. But the whole question of cycles of disease can scarcely yet be handled scientifically."

THE WANDERING COMETS OF THE MIND.

The return of seasons and the growth of plants indicate nature's unerring cycle, but in the planetary system this law is illustrated, and time is kept to the second. For centuries comets seemed an exception, but they more fully proclaim this law than the revolutions of Saturn—and thus with *mental* disturbances—the comets of the mind. Let them undergo the same inspection, and they shall be equally intelligible. "The mind, like the universe, has evidently its pervading law; and the soul, like the solar system, gravitates according to the plan of balancing forces and recurring cycles." Says Dr. Holmes, "keep any line of knowledge ten years, and another line will intersect it."

CHAPTER V.

DISEASE AND INSANITY.

NOR are we left to conjecture, for we find that diseases and plagues have their time of visitations, and fevers are periodically intermittent. The physician can predict the crisis. And even in Insanity, where all order seems defied, Periodicity is recognised. Derangement, intelligent on *this* point, corroborates the law, and Esquirol found it in Idiocy. Shall madness have its method and sanity have none? Shall reason understand every subject but itself, and surrender to chance?

In a hospital, the tendency of patients to suicide was epidemical; and this, not from the contagion of example, as great care was taken to keep such information from each inmate; and an intelligent physician has remarked days when there was simultaneous excitement, with consequent difficulty in management. He mitigated such recurrence by a diet less stimulating.

At a meeting of the British Medical Asso-

ciation, in Chester, 1866, (to which Dr. C. C. Cox was delegated by a similar meeting in this country,) an address was made by Professor Hughes Bennett, from which the following extract is made: "This mutual relation of the sciences has led to generalizations of the highest importance to our knowledge of vital action both in health and disease. Thus, it having been shown by Grove, that the various physical forces, such as heat, light, electricity, gravity and chemical action, are all correlative; it soon became apparent not only that there was a similar relation between the vital forces, such as those governing growth, nutrition, contractility and excitability, but also between these and the physical forces. It has further been shown, that just as matter is indestructible, only changing its condition, so is there a conservation of force which only alters its form. In the same manner that heat, light, electricity, gravity and chemical action are capable of being perpetuated in an incessant round, one to the other, so we must regard growth, contractility, sensibility and even the exercise of mind, as only varieties in form of that chemical force generated in nutrition, as this in its turn is only an altered manifestation of some other force."

ISOLATION REMEDIAL.

Memory's cycle, in derangement irresistible, is, in a sound mind, controllable. The recollection of some painful event, like a physical touch, wakes the midnight hour, and then vanishes in the engagements of the day. At night it returns at intervals so expanded that we ask: "How came that long lost thought?" But the law is as clear as when the sore attention was first tied to the shock. Hence, to obviate derangement, we break the cycle of previous associations. Inebriate Asylums may show how *far* this isolation succeeds, but there is an historical fact highly suggestive. The Mutineers of the "Bounty" abandoned their officers, and escaping to Pitcairn's Island, became so profligate as to threaten their own destruction; but thus secluded, without any ligament to the purer past except an old Prayer book, they became wonderfully reformed, and when discovered, their piety shamed their English visitors.

Pitcairn shows that truth is not only stranger, but *stronger* than fiction, where it has a fair field.

THE CIRCULATION OF THOUGHT.

The blood circulated in periodic cycles from

man's creation, and yet was undiscovered until 1620. Shall the physical heart obey this law, while the moral pulsations are abandoned to chance? Then, instead of looking *up* from Nature, we should look *down*, the body yield to the lily, and the gem pale before its casket. But we *rise* from the natural, and some future Harvey may deduce a periodicity far superior to any physical law, and the discoverer exclaim: "When I consider the firmament of the mind, what is man that thou art mindful of him?" Men may wonder why such discovery was so long delayed, and the Prophet dyed in blood so long misunderstood.

Since Harvey's day the microscope has discovered that each particle of blood is a disc or globule, a planet in the veins, with its orbit in regular cycles; with its day and night in the bright arterial or dark venous. What next? Shall blood, the sustainer of thought, be thus minutely periodic, and thought itself have no cycle?

POPULAR COMMOTIONS.

"The noise of the waves and the madness of the people" respond to each other; they are under the same law, and hence popular commotions never surprise the thoughtful. Bishop

Butler thought that nations, like individuals, had their seasons of derangement, and Mr. Burke predicted the French Revolution long previously. If the law applies to individuals, much more to communities, and how valuable its ascertainment. The Highlands were for centuries nuclei of dissension, until the government, by enlistment, changed a positive evil into a positive good.

CHAPTER VI.

EDUCATION.

A TEACHER of large experience stated that in every eight years his school became so reduced as to threaten failure, but by steady continuance its prosperity regularly returned. How encouraging this law to every one depending on numbers for support. It is as the regulator in mechanical motion. The faithful laborer cannot miss either the Nadir or the Zenith. The same popular wave laves the Capitol and the Tarpeian rock. Every business or profession is held by two opposing forces, and it approaches or recedes from the central sun, thus alternating summer and winter. "At evening time it shall be light."

"Fortune you say flies from us ; she but circles
Like the fleet sea-bird round the fowler's skiff,
Lost in the mist one moment—and the next,
Brushing the white sail with her whiter wing,
As if to court the aim ; Experience watches
And has her on the wheel."

The mind is like a phial ; fill it and the superfluity is lost ; and the mind itself is injured by the pressure, and even when the educator has graduated instruction to various capacities, he must anticipate a periodic expansion and contraction of the mind itself, so that the lesson to-day mastered is to-morrow unmanageable. Physical causes, as desks, ventilation, have indoubtless their influence, but we must consider *moral* conditions. A scholar excels his classmates ; the teacher and parents are greatly encouraged. They praise the model, but how soon is the tree withered. Attention droops into listlessness. Cannot science, which detects disease in the minute spores, discover moral deficiencies, wasting the memory and thwarting the best devised educational system ? Are not moral epidemics as periodic as physical ? This mental and moral cycle demands thoughtful study.

In an essay on "Unconscious Tuition," Rev. Dr. Huntington asks, if "the dark days at school are totally inexplicable and inevitable phenomena ?" He believes that "whenever Physiology and Psychology are as exactly understood as the mathematical relations of Astronomy, these freaks of temperament may be predicted like the eclipse of the sun ; and is

not temptation itself subject to spiritual laws, which we may hope to comprehend as we have deeper fellowship with Him who hath put all things under his feet?" These new and high thoughts are the harbingers of a day dawn, and we agree with Professor Henry, that "the laws which govern the growth and operation of the human mind are as definite and as general in their application as those which apply to the material universe; and it is evident that any true system of education must be based upon a knowledge and application of those laws."

RELIGIOUS DEPRESSIONS.

Religious seasons are not an arbitrary appointment, but a demand of our nature. The Sabbath was made for man, and as the planets revolve round their sun, so the heart around its creator, embracing its shortest day—"Ne-fastus dies," and then its summer gladness without sunset.

We thus may solve many difficulties in biography, and learn why Brainerd and Martyn were so alternately depressed and elevated. Is there a special grief or joy? Mark if a year or month does not bring its counterpart. Nor is the darkest day uncompensated. The gloom

of November brings the spring; the fall of the leaf heralds the new-born bud, and the moral fallow reaps a harvest.

“Giant Despair had doubtless made an end of them, but that he fell into one of his fits, for he sometimes in sunshiny weather thus fell, and lost the use of his hands; wherefore he withdrew and left them to consider what to do, and when he arose to pursue them, his limbs failed, for his fits took him again; wherefore the Pilgrims erected a Pillar warning travellers of the Giant’s castle,” but they might have added that he was subject to periodic fits, and that Pilgrims may always find the castle key in their own bosom.

“Alas!” says Robertson, “for the substitution of an artificially created conscience for the sound and healthy one of humanity, whose tides are distinct in their noble music, like those of nature’s ocean in its irresistible swell.” And Robertson spoke from experience, for “the deeper his interest in his work, the greater his excitement; the greater the excitement, the more morbid the reaction; the more gloomy the aspect in which he saw his labors, the darker his misgivings of success.”

In a book, entitled “Man, Moral and Physical,” Rev. Dr. Jones remarks: “We have

known instances in which the seasons of spiritual joy and depression alternated like an intermittent disease, coming and going at regular intervals. In Buenos Ayres, during the prevalence of a north wind, moral derangements abound. A gentleman, generally amiable, was so affected by this wind as to quarrel with any one he met. Cowper's nerves were as sensitive to the atmosphere as mercury in the barometer. He rose cheerless and depressed, and brightened as the sun goes on. He had his four states of feeling, as the revolving earth describes the four grand stages of the sun's progress in the ecliptic."

In all cases of depression or excitement the patient does not see this law until the reflective reaction occurs, just as Bunyan's Pilgrim, *after* passing a certain place, learned the cause of blasphemous thoughts; or, as Cole, the artist, who could not paint a new scene until the excitement subsided; or, as Dr. Rush, who, writing on Diseases of the Mind, yet, in his own depression, forgot the "Physical Causes." Nor was he convinced until spiritual distress was removed by returning health.

Says Mansell: "The luminary conscience, by whose influence the ebb and flow of man's moral being is regulated, moves around and

along with man's little world, in a regular and bounded orbit; one side, and one side only, looks downward upon its earthly centre; the other, which we see not, is ever turned upwards to the all surrounding Infinite. And those tides have their seasons of rise and fall, their place of strength and weakness; and that light waxes and wanes with the growth and decay of man's mental and moral and religious culture; and its borrowed rays seem at times to shine as with their own lustre, in rivalry, even in opposition, to the source from which they emanate."

The uneasiness, which is so unaccountable, may result from a suspension of some occupation or employment belonging to that hour, as when a person habituated to composition on Fridays, allowed the time to pass unimproved, and, consequently, the accumulation of mental force was wasted on magnified trifles, or the mind preyed on itself. In this case uneasiness is a signal warning.

The journey of a day is life's pictorial. Obidah rises for his journey, animated by hope and incited by desire, but soon sinks with fatigue, wanders amidst devious paths, and at last discovers a light which beckons him to repose; and thus we rise in the morning re-

freshed, we wander amidst the intricacies of business, forget our early resolutions, become lost in perplexities, until evening restores the morning calm and the shadow of the Almighty. There are periods of the day when one may safely bear an insult, at other times one may not argue with a friend. The moral day has its evening and its morning. How happy if we knew this diurnal cycle. How wise the knowledge of self!

What are the coincidences of history and our own personal experience but the revelations of Periodicity? The traveller lost in the forest unconsciously returns to the place of starting.

THE LAW OF COINCIDENCE.

There are many facts difficult to classify in our present imperfect knowledge, which, however, point to some law of coincidence, as when you call upon a number of persons whose names you have recorded; and, after a day's exertion, not one can be found; while on the next day, without any effort, you meet one after another in immediate succession; or, you are introduced to a stranger, whose name you never heard before, and on reading the next publication the eye rests upon the very

name; or, you experience some accident, and, on opening a book, the very particulars arrest your gaze; or, one makes some discovery, deemed entirely original, and across the ocean some solitary thinker at the same time has made a similar discovery, and hence a life-long contest. Or, one will read the scriptural lessons for the day, and they shall be found precisely adapted to some recent event in one's own experience, family or political relations. All which suggests that there cannot be an internal thought without some external correspondence as invariable as substance and shadow, perceptibly proportioned to intensity of light, or events are so related that one must always accompany the other.

This sympathy of nature with important providences has been often observed by our standard authors; as, "When beggars die there are no comets seen," or

"When the Poet dies,
Mute nature mourns her worshipper."

Or, at the fall of our first parents, "Earth felt the wound;" and each one will at once recall the portents of the Crucifixion. Indeed, it seems as if nature, to prevent mistakes, demands duplicates; or, as Bishop Butler ob-

serves: "There is a much more exact correspondence between the natural and moral world than we are apt to take notice of. The inward frame of man does, in a peculiar manner, answer to the external condition and circumstances of life in which he is placed. This is a particular instance of that general observation of the son of Sirach, 'All things are double, one against another, and God hath made nothing imperfect.'"

CHAPTER VII.

SCIENCE AND MIRTH.

IN a choice painting, Hercules is represented choosing between Wisdom and Pleasure. On the right, Wisdom stands sombre and melancholy, while Pleasure is surrounded by festive amusements. Is this just? Is there a necessary estrangement between the two? Make Wisdom more cheerful, or (far better) "let both united be."

A distinguished writer says, that History has its bright side, and its very gloom may evoke a smile. Agassiz intimates, that amidst the wonderful designs of nature the mirthful is found; and why not? We have the principle within, why not its external correspondent? The very lightning has its freaks. The London *Times* declares that England is the receptacle of old clothes, which entering the gulf of Leeds, &c., return under a renovated form to the discarding owners; and the citizen, congratulating himself on the well-fitting Talma or Chesterfield, is dashed by thinking,

“This coat may be substantially the very one I gave the beggar last winter.”

Nor does the curious transmigration cease here. It seems that cast off garments are used in cultivating the ground, and are particularly useful in raising hops; so that the same citizen, tasting the glass of “Alsopp’s Bitter,” is arrested by thinking that *his* donation furnished the sparkling bead, and his liberality returned in a way unexpected. The Brahmin ate no animal food until he saw through a microscope, and the eagle’s wound was intensified by seeing his own feather on the arrow.

“To what base uses may we not return, Horatio? Why may not the imagination trace the noble dust of Alexander till he find it stopping a bung-hole?” But behold a nobler metempsychosis. The rejected garment of the king exchanged by him for the costly toga, with the superadded cask of Chian.

This cycle of exchange is seen in departments apparently most distant. “The earth and the air convert themselves into a plant, the flower into fruit, the fruit into flesh, and the animal at last dies and returns to the air and earth what they have transmitted to him.”

Our very toys are becoming scientific, and the aquarium exhibits a perennial cycle—the carbon of the fish and the oxygen of the plant.

PRE-EXISTENCE.

The unexpected thought that disturbs the mind, comes from undetected association with some past event, and may not this explain that Pre-Existence of which we all are conscious? I go into some new place and converse with a stranger, but I must have been here before, and I have seen that face repeatedly; where, I know not, but the impression is indelible.

A gentleman and his mother were travelling in Switzerland, and lodging in the room of a certain village, he exclaimed, "I have been here before!" She, knowing the contrary, revolved the matter in her mind. The nursery where her son was born was papered with the same figure as that on the Swiss wall, and he, unconscious of the connecting link, maintained that the room itself was the same; and thus, some image on the memory returns in after years through some similar association, and we become conscious of pre-existence.

POST-EXISTENCE.

Directly the reverse of the above, is a state of mind which I shall call Post-Existence. I engage in an earnest conversation with a friend,

and some days afterwards discover a meaning, which at first entirely escaped my attention. "Why did I not see it before?" The reactionary calmness of clear reason enables me to see points concealed by the previous excitement. The writing on the Dighton rock is plainly seen at *low* tide.

When Bishop Butler was dying, he complained of spiritual darkness. Said his Chaplain, "Come unto *me*, all ye that are weary and heavy laden." "That text," said the Bishop, "I never so appreciated as now;" and how much more will he appreciate it where analogies fade before direct truth.

DREAMS.

How mysterious are dreams! How dark their shadow on the morrow! Indeed, many abandon them as unaccountable. But that vampyre is the cycle of some past event or conversation. It is occasioned by some excess, a slight noise, the posture or a heated atmosphere. It is a partial somnambulism, and if any friend could watch the dreamer he might see the cause of the painful impression. The very vampyre has its natural history.

WRITING AND CONVERSATION.

A curious illustration of mental Periodicity is furnished by a clerical friend, who restricted his manuscript to twelve pages ; but this convenience became a necessity, so that whatever his subject, he could not shorten or prolong his ideas beyond the restriction until another week allowed recuperation.

Washington Irving said that there were times when he composed with great facility, but if he wrote on other occasions he must *force* his thoughts, and consequently re-compose ; and this doubtless is the experience of all composers and speakers, who sometimes enjoy a facility of expression entirely independent of previous preparation. One of our first extemporaneous speakers says, that in his best efforts he sometimes loses all conscious hold on his mind and speech, and while perfectly sure that all is going on well, it seems to him that some one else is talking, and he wonders who is thus speaking ; and perhaps in his *worst* efforts, he feels as though some one were holding his thoughts and voice, and he struggles against the intruder.

An intelligent conversation begins with general observations. It becomes animated by collision of thought ; the principal point is

eagerly discussed; new ideas impart mutual satisfaction, until the inevitable pause recalls the dull beginning and a new idea seems impossible. The bow of the tongue is bent until the pause allows recuperation.

A poem is born, not made. The national heart is deeply moved, mind fuses with mind, until the accumulated pressure bursts into a song cataract. The Marsellaise, like the Parian statue, lived in the national mind; a slight occasion embodied its fevered pulsations. Said the Mayor of Strasburg: "This city is shortly to have a patriotic ceremony, and you, De Lisle, must be inspired by these last drops to produce a hymn which conveys to the soul of the people the enthusiasm that inspired it." Rouget De Lisle went to his room, and on his small clavicord, now composing the air before the words, and now the words before the air, combined them so intimately in his mind that he never could tell which was first, the air or the words, so impossible did he find it to separate the poetry from the music, and the feeling from the expression. He sang every thing, wrote nothing.

This law of rhythm applies equally to every individual. Let the heart be clouded with sorrow or attuned to gladness, and some sym-

phony shall inwardly reverberate. Beethoven composed his grandest music after he had lost the sense of hearing, showing an internal sense of harmony whose own reality dispenses with the aids by which it has been trained. Says Bulwer: "In the world of the human heart there is the same harmony as in the external universe. In fault and sorrow are the axioms, problems and postulates of a science."

A depraved Italian painter failed to catch the expression of the exquisite models before him; his paintings, like his character, were revolting to the pure-minded. But mark the reverse law! Leonardo D' Vinci tried nine times to fix the countenance of St. John, and each time he erased the laborious expression, and notwithstanding the complaints of his delay and threatened loss of stipend, he refused to attempt the head of Christ until he better appreciated his character. Need I say that this painting lives? It was spared by Napoleon in the capture of Milan.

CHAPTER VIII.

RHYTHM.

STRIKINGLY similar to this law is the numerical rhythm which pervades every department. The elements of the air and water combine only in certain arithmetical proportions, which no human force can change—a law whose execution explodes the battery and volcano. Salts crystallize only at certain angles, and the snow-flake is a pentagon or hexagon. The harmonies of music depend on numerical rhythm; each note strikes certain vibrations in the atmosphere, from the percussions of the deep base to the higher notes falling in a sharp blow. If another note intrude or miss its appointment, painful discord proclaims the violated law. The series of fractions in the leaves around the plant stem is the same which marks the periods of the planets, the antennæ of the polyp and the spines of the echinus, and when we ascend to history we find that kingdoms move in cycles wonderfully coincident.

THE NUMBER SEVEN.

On the 7th of the 7th month a-holy observance was ordained to the children of Israel, who feasted 7 days and remained 7 days in tents; the 7th year was directed to be a Sabbath of rest for all things, and at the end of 7 times 7 years commenced the grand jubilee; every 7th year the land lay fallow; every 7th year there was a grand release from all debts, and bondmen were set free. From this law might have originated the custom of binding young men to 7 years' apprenticeship, and of punishing incorrigible offenders by transportation for 7, twice 7, or three times 7 years. Anciently, a child was not named before 7 days, not being accounted fully to have life before that periodical day. The teeth spring out in the 7th month, and are shed in the 7th year, when infancy is changed into childhood. At thrice 7 years the faculties are developed, manhood commences, and man becomes legally competent to all civil acts; at four times 7 a man is in full possession of his strength; at five times 7 he is fit for the business of the world; at six times 7 he becomes graver and wiser, or never; at 7 times 7 he is in his apogee, and from that decays; at eight times

7 he is in his first climacteric; at nine times 7, or sixty-three, he is in his grand climacteric, or year of danger; and ten times 7, or three-score years and ten, was, by the royal prophet, pronounced the period of human life.

SCRIPTURAL NUMBERS.

There are in Holy Scripture 12 cycles of 40 years each, 6 of 450, 4 of 430, 3 of 1,000, viz., 1,000 years from the Abrahamic Covenant to Solomon; 1,000 from the Exodus of Israel to the destruction of the Temple, and 1,000 from the Dedication to the Birth of Christ.

Rev. Dr. Mahan has kindly furnished the accompanying results of biblical investigation:

“The periodicity or significant recurrence of certain favorite numbers, such as 40, 7, 430, 490, 1260 and the like, in the Hebrew chronology, has been amply demonstrated by Browne in his *Ordo Sæculorum*. In an independent examination of the same ground, I corrected two or three places, in which Browne had departed from his own principle of *literal* interpretation, but found that this multiplied, instead of diminishing, the number of marked

symmetrical periods, as is shown in my little work entitled *Palmoni*. For instance, in that marked period extending from the *Captivity* in Babylon to the final Dispersion of the Jews, during which the four 'great beasts' come up out of the sea, there are no less than twenty exact periods of precisely 666 years. Thus, from 3428 A. M., the year of Manasseh, the first king carried into captivity, to 4094, when Augustus became emperor, there are precisely 666 years. Or, from 3528, the 'ninth year of Nebuchadnezzar,' when Jeremiah prophesied the rejection of the Jews under the image of the 'bad figs,' to 4194, when Jerusalem was destroyed by Titus, is the same 666 years. Or, from the last year of Cyrus, 3594, to 4260, the final Dispersion of the Jews and their banishment from Jerusalem under Hadrian, there is the same exact term. So, in general, from Manasseh the first fruits of captivity to the end of Cyrus who restored the captives, there is an interval of 166 years, of which 36 are precisely *dated* in the Scriptures; in like manner, from Augustus to the final Dispersion of the Jews under Hadrian, there are 166 years, about 30 of which are dates of important events. Now, if we measure from all the dates, successively, of the first term, to corres-

ponding dates of the second, we shall find, in some twenty instances at least, that the measure is precisely 666 years. We say, therefore, that the number 666, the 'number of the beast,' recurs with a most remarkable periodicity during *the beast period* of history, namely, during the time when the four great empires, the 'beasts' of Daniel, had dominion given to them over the sacred people.

"A wider examination will put it beyond question that the same principle of periodicity pervades all chronology; that every grand development of human history has its favorite periods of years, which periods are expressive of certain appropriate ideas, and recur with a frequency which no theory of chance coincidences can begin to account for. When I wrote *Palmoni*, I thought the rule would not apply to modern history; but, I have found, on thorough examination, that it does so apply with marvellous precision, and that it applies nowhere with more marked regularity than in our own times—this rational nineteenth century.

"It would need a volume, rather than a mere note, to show that all the names in the Hebrew and Greek Scriptures are so constructed that when *their number* is ascertained,

that is, when the numerical value of their component letters is summed up, these numbers will be found invariably significant.

“ Thus, the number of ‘the beast’ is 666 ; but the number of JESUS is 888 : six being the number of secular perfection, and eight the number of resurrection or new life. In like manner the number 153, in St. John xxi., is manifestly used as a mystical or significant number. But what does it signify ? It is the number of the Hebrew phrase, *beni-ha-Elohim*, *Sons of God*. This can be ascertained by substituting for the letters of that phrase the corresponding *ciphers*, and by adding them up. And this, again, can be demonstrated to be no isolated coincidence, no happy accident, but a *principle* pervading the entire structure of the Hebrew and Greek Scriptures, by the following experiment : Take all the marked passages in the Old Testament Hebrew, or in the New Testament Greek, in which the idea of ‘the Sons of God’ is particularly prominent. For example, take the eighth chapter of St. Paul’s Epistle to the Romans : ascertain the value of each word, and verse, and paragraph, by the simple process of adding up the letters they contain ; finally, ascertain the value of the whole chapter. It will be found, first,

that certain prominent phrases or words are exact multiples of 153; for example, the word *joint-heirs* is 1071—seven times 153. Secondly, the most expressive sections of the chapter are exact multiples of the same. Thirdly, the whole chapter will be found to come under the same rule. This last result, however, is less certain than the others, owing to some ‘various readings’ in the first part of the chapter, which embarrass our calculations. In the latter part of the chapter, which treats of the predestination of the Sons of God to glory, there are no variations of any importance; the ‘number,’ therefore, can be ascertained with precision, and this number is beyond all question a multiple of 153.

“I have tried the same experiment on more than one hundred marked passages of the same character, in the Hebrew and in the Greek, and in every instance with the same result.

“I have tried similar experiments, with other significant numbers, such as 8, 13, 17, 31, 42, or to take larger figures, 666, 777, 888, 999, and the like, in thousands of passages, varying in length from a mere word or phrase to whole chapters, or even books, and have found invariably the number of any marked passage to be a significant multiple of the

number appropriate to its prominent idea. Thus, *thirteen* is a number of sin; the third chapter of Genesis describes the first sin and its consequences; this chapter in its numerical value as a whole, and in its leading sections, and in its most expressive verses or phrases, will be found to be always an exact multiple of thirteen.

“This will give a faint idea, perhaps, of the result of an examination of the text of Scripture, which has occupied me for many years, and in which every point has been tested by frequent reviews at long intervals, without revealing a single exception to the rule that the very style of Scripture is constructed with a view to ‘measure and weight and number;’ that, as in nature, every precious stone has its number, which science can ascertain, so, in Revelation, every idea has its arithmetical expression; and whenever any given idea is prominent there, a careful analysis will reveal the proper number of that idea, either in its simple form or in some expressive multiple of the same.”

The Assyrian Empire lasted 1580 years; the Egyptian, 1663; the Jewish, 1522; Grecian, 1410; Roman, 1129; an average of 1461 years, remarkable as the Sothiac period, which

comprehended the existence of the Phœnix ; and thus says D'Aubigne : " From the heights where thoughtful spirits climb, the world's history, instead of offering as to the ignorant crowd a confused chaos, appears a majestic Temple, which the invisible hand of God creates, and which rises to His glory above the rock of humanity."

Bishop Berkeley was a poet and a benefactor, who devoted his life and fortune to the cause of Education in America. Such a person was naturally a prophet, and in his only poem (1726) he thus predicts :

" Westward the course of Empire takes its way ;
The first four acts already past,
The fifth shall close the drama with the day :
Time's noblest offspring is the last."

At a banquet given to the Chinese embassy in San Francisco, the Hon. Mr. Burlingame thus spoke :

" The first mission sent forth by one-third of the human race to the nations of the West has arrived. The hour is struck ! The day is come for which Ricci, Verbrast, Schaal, Morrison, Milne, Bridgman, Culbertson, (we may add Schwartz, Heber, Martyn, Boone,) and

a host of others lived, labored and died—a day when the East would stretch forth its arms towards the shining banners of Christianity and civilization.”

Doubtless this Star of Empire will advance westward through China and Japan so auspiciously opened, and the nations of the East shall follow its ray until it returns to its starting point on the plains of Bethlehem.

When Benjamin West visited Rome in 1760, he met a famous Improvisatore, who, learning that an American had come to study the fine arts, at once addressed him with the ardor of inspiration and to the music of the guitar: “All things of heavenly origin, like the glorious sun, move westward, and Truth and Art have their *periods of shining and night*. Rejoice, then, O venerable Rome, in thy Divine destiny, for though darkness overthrow thy seats, and though thy mitred head must descend to the dust, thy spirit, immortal and undecayed, already spreads towards a new world.”

Says D’Israeli: “The French Revolution called our attention to the public and private history of Charles the First and Cromwell, and taking a wider range, we found that in the governments of Greece and Rome the events

of those times had only been reproduced. The same principles terminated in the same results and the same personages in the same drama." "A History of the French Revolution, by a Society of Latin Authors," describing inimitably the various events, is actually written by the Roman historians themselves.

The *Courier des Etats Unis* sets forth the striking similitude of the leading events in the downfall of Charles X. and Louis Philippe; both kings were dethroned at the age of 74; both abdicate in favor of grandsons, each 10 years of age. The previous combat with the people lasted in each case three days. During the year preceding each fall, bread rose to an exorbitant price, and, as if nature sympathized with portentous events, terrific storms arose immediately after each downfall. Indeed, the similarity will surprise any one not accustomed to the perpetual parallels of history. "For very mysterious as the government of God is, yet we may observe throughout that His providences have a tendency to unfold themselves again and again under analogous circumstances and in similar results, and all these going on to further developments in that which is infinite." And this remark of Dr. Isaac Williams is illustrated by the fact,

that the Israelites went out of Egypt, and Christ was put to death on the fifteenth day of the month Nisan—a coincidence not intended by man. (Matt. xxvi., 5.) And the conquest of Judea by Pompey, B. C. 63, was on the very day when the Jews were commemorating its previous capture by Nebuchadnezzar.

A popular lecturer who had visited our principal cities made a singular discovery. Wherever he went they all laughed, listened, were inattentive, at the same points. The same boys in front eating nuts, the young gentleman and lady attentive to each other, the thinker absorbed, the citizen asleep; the nervous, late comer, who generally succeeded in overthrowing a bench or an umbrella at the most affecting period. There was the same sympathetic chord between each one's head and the opening door, until at last the lecturer concluded that each audience was a large vertebrate following him. The same persons perhaps may never meet again, but the same lecture will always educe the same mental crystalization.

This vertebrate principle is seen not only in promiscuous assemblages but more particularly in regularly organized bodies. Here the vertebrate expands and contracts; and one will observe in our national and State legislatures

a remarkable expenditure and then at once a grasp of retrenchment, a change entirely unaccountable, says a Washington correspondent, except on the principle of Periodicity.

Each family is a miniature government, with its periodic elevations and depressions, a pendulum between a smile and a tear. Yesterday every thing was perverse, it was vain to stem the current. To-day all is right, nor is this necessarily Monday. Let not, then, the house-keeper impute to *herself* all yesterday's blunders.

Says Herbert Spencer: "The rhythmical tendency is traceable in all departments of life, in the despotism after revolution, the alternation of reforming and conservative epochs, ascetism and licentiousness, regularly recurring inflations and panics of commerce;" in fashions so carried from one extreme to another, that a gentleman of the old school in wearing one style of apparel found himself seven times fashionable during his life. "This rhythmical tendency affects our table habits, and, by implication, the dietary of the young in their progress to maturity."

CHAPTER IX.

MORAL RETRIBUTION.

ALL nations recognise the law of retribution. The good or bad deed will rise again ; Phillippi colonizes ; Nemesis waits the hour and the man. The unerring cycle falls upon the mind in joyous recollection or painful remorse. We may not predict the precise *results*, but we are sure that sin will find its perpetrator. The cranes of Ibicus fly in circles. The overworked land must repossess its Sabbaths.

“ And Bertram’s might and Bertram’s right
Shall rest on Ellengowan’s height.”

Says Alison : “ The undeserved death of Marie Antoinette was one means of bringing its own punishment. Slow but sure came the hour of Germany’s revenge. On that day twenty years from which she ascended the scaffold commenced the fatal route of France on the field of Leipsic.” Said Vergniaud : “ I perceive, citizens, that the revolution, like Saturn, will devour its own children ;” and Rou-

get De Lisle escaped from his pursuers by hearing them sing his own Marsellaise.

Says Goethe: "Moral epochs have their course as well as the seasons. We can no more hold them fast than the sun, moon and stars. Our faults perpetually return upon us, and herein lies the subtlest difficulty of self-knowledge."

IS PERIODICITY FATALISTIC ?

Quetelet declares, that, from the investigations of years, there is more regularity in those events which allow of choice than in purely natural processes. The cycle of harvest failures is modified by improved cultivation, and the ratio of mortality through sanitary arrangements.

Had, then, the intercessions of a people no influence on the comet, the eclipse and the king's evil? Their petition was granted, not by a change of law, but by a change of their own views through the revelations of Copernicus and others. Canute does not stop the waves, he transfers his own position. The Indian looking through violet glass sees a conflagration, and his fears are removed by higher intelligence; and thus as prayer lessens, praise increases. Thought is not absolute; the wish

is its father; and the cycle of the debtor's memory is always longer "coming round" than that of his creditor.

So far from the Periodic Law being fatalistic, it seems to reconcile the long controversy between destiny and free will. God is unchangeable, and yet He may appoint laws as invariable as Himself, but capable of modification up to a *certain point*, easily discernible by those who watch the growth of habits in themselves or in others.

CUI BONO ?

In an age so practical, the question is asked, "Cui Bono?" "Of what use is the Periodic Law?" The same inquiry was made of Franklin as to his electrical experiments, and he replied, "What is the use of an infant?" "The statement cannot be too often repeated," says Professor Henry, "that each branch of knowledge is connected with every other, and that no light can be gained by one which is not reflected on all;" and he illustrates this by the discoveries of a German astronomer, who, for thirty years observed the sun spots, and was rewarded by ascertaining that they recurred in periods of eleven years; and, strange to say, General Sabine afterwards discovered

that the periods of magnetic disturbances coincide with the recurrence of solar spots. And so, from the tables of Dr. Kane, "Mr. Schott found periods of extreme cold in six days, and always at full moon, while the least cold was at new moon; thus showing that scientific researches will lead to valuable results not anticipated, and that in time dull meteorological tables will not only reflect the past but foreshadow the future, and enable us by their monitions to avail ourselves of the benignity, or guard against the ravage of the coming day."

The advantage of the Periodic Law will appear in the elevation of immutable laws, in place of those artificial ordinances which legislators have devised. How often has man tried by statute to graduate values, and yet all such restrictions have been as useless as commanding the waves or fulminations against a comet. Man's interference will be found not only a blunder but a crime; *imperium in imperio*, and the experimenter will be rebuked as he who would distribute the rain.

The newly discovered physical and mental laws become moral, realizing that kingdom anticipated by Bishop Butler, self-executing and harmonious; the prayer of ages is an-

answered, and God's will is done on earth as in Heaven. The warnings of history declare, "Refrain from these laws, and let them alone, lest haply ye be found even to fight against God." The President of the Social Science Association says: "That the limitation of the day's work to any number of hours will defeat itself, and the operative is governed by laws common to all sorts and conditions of men, and which will inevitably prove superior in strength and duration to any rules which he may form for himself, his trade or his class." Says Edmund Burke: "Our paper is of value in commerce because it has none in law."

And I am told that "Science is sometimes immoral?" Its *truths* never are; and Dr. McCosh shows from Plutarch that the cycle of science embraces the faith both of the peasant and the most advanced scholar. Sir Isaac Newton declares, that natural and moral philosophy progress together, and the golden numbers of Meto, used for the Olympic games, now determine the Easter festival.

THE CYCLE OF SCIENCE.

Says Dr. McCosh: "The enlightened philosopher who has penetrated the farthest into the mysteries of nature, arrives at last at the

conclusion with which the believing savage and peasant set out: that God is seen in the rain, sunshine and in every event. The partial views he obtained in climbing the hill of science were more confused than those he obtained in the plain below; and it is not until he reaches the summit, and the whole scene stretches out before him, that they become clear and comprehensive. Human science contemplated under this aspect is a cycle; as we go around it we obtain many pleasant and instructive views, but we arrive at last at the point we set out—simple faith in an all acting God.”

The common proverbs of the people embody the highest maxims of philosophy.

CHAPTER X.

THOUGHT INDESTRUCTIBLE.

WILL thought die simultaneously with the body turning to dust? Scattered by the winds or consumed in flame, the dust itself assumes another form more refined; and how often do memories long buried rise in their original vividness. The drowning man remembered an unkind act forgotten since childhood, and the early language of the dying Swede was heard by the surprised bystanders. This reduction of the spiritual principle to law is sometimes regarded as materialistic; but the grossest material is indestructible to the eye of science, which traces the psyche from the grub, detects the inward soul beneath the outward, and looks not on the things which are seen, but on those not seen. The returning cycle of early impressions is familiar, and the future world is the post-existence of the present.

The following lines, like the past they commemorate, often return on the waif-tides of journalism:

THE RIVER OF TIME.

“OH, a wonderful stream is the river of Time,
As it runs through the realms of tears ;
With a faultless rhythm and a musical rhyme,
And a broad'ning sweep, and a surge sublime,
That blends with the ocean of years.

How the winters are drifting like flakes of snow,
And the summer like buds between ;
And the year in the sheaf—so they come and they go
On the river's breast, with its ebb and flow,
As it glides through the shadow and sheen.

There's a musical isle on the river of Time,
Where the softest of airs are playing ;
There's a cloudless sky and a tropical clime,
And a song as sweet as a vesper chime,
And the Junes with the roses are staying.

And the name of this isle is the Long Ago,
And we bury our treasures there ;
There are brows of beauty and bosoms of snow—
There are heaps of dust, but we loved them so !
There are trinkets and tresses of hair.

There are fragments of songs that nobody sings,
And a part of an infant's prayer ;
There's a lute unswept, and a harp without strings,
There are broken vows and pieces of rings,
And the garment that SHE used to wear.

There are hands that are waved when the fairy shore
By the mirage is lifted in air ;
And we sometimes hear through the turbulent roar
Sweet voices we heard in the days gone before,
When the wind down the river is fair.

Oh ! remembered for aye be that blessed isle,
All the days of our life till night—
When the evening comes with its beautiful smile,
And our eyes are closing to slumber awhile,
May our ‘ greenwood ’ of soul be in sight ! ”

MENTAL SYMPATHY.

Thought not only survives but vindicates its power in ways apparently miraculous. Coming events notify the practiced eye ; unmistakable instinct is independent of visible proof, and the solitary thinker beholds far in advance of his time. You at once penetrate through polished manners and winning smiles to the character, and subsequent experience confirms the undefinable warning.

By concentrated thought the prisoner of the Bastille, with a cord and knife, cuts his chains, scales the roof, penetrates the wall and is free ; the unartistic monk carves by soul-intensity the crucifix engraved on his heart. You think of a friend, and he comes ; or gaze intently on him in a crowd, and he recognises you.

This sympathy outstrips the lightning, and soars above the limitations of time and space. Two classmates graduated ; the one became a merchant in New-York, the other emigrated

to the Western frontier ; the former intimacy was entirely forgotten, until the impression of his suffering classmate in the West led the merchant to send the needed aid. That friend was destitute. A snow-storm had blocked the roads, stopped the usual communications, and without bread he turned his thoughts Eastward, and wrote to his former classmate. The aid came before the letter reached the merchant.

Simultaneous observations of the weather develop laws new and useful. Has this simultaneousness of *thought* no importance? What if the deep impression or uneasiness as to some absent friend be partially the effect of his concentrated thought on myself? Is a particular desire self-originating, or does it come from another independent intelligence? A gentleman interested in certain property returned from Europe after a fruitless search for the title. In general conversation he casually mentioned his failure, and was accosted by a stranger who had in his possession the papers in question, and who was himself ignorant of their ownership. Says Isaac Taylor : "The great miracle of Providence is, that no miracles are needed to accomplish its purpose. Countless series of events are travelling from

remote quarters towards the same point, and each series moves in the beaten track of natural occurrences, but their intersection at the very moment in which they meet shall serve, perhaps, to give a new direction to the affairs of an empire."

MORAL INFLUENCE.

If mental sympathy be such, what must be the force of moral influence, that essential of Omnipotence? We know that gravitation is proportioned to the weight and inversely to the square of distance. From the falling microcosm Newton deduced laws which harmonized the material universe. Can we analyze the elements of moral force? There is one law—energy from self-denial, which regulates the duties of every station and the advancement of every faculty—elevating the smallest act to the highest proportions, annihilating distance and establishing relations between persons and climes unapproachably distant. This oracle proclaims the good Samaritan's neighbor, blending in one the foreign and domestic: "The Son of Man who *is* in heaven," because heaven is mercy embodied.

Physical force diminishes, the projectile falls from its start, but in moral force you mark the

beautiful reverse. The prophet has no honor in his *own* country—the inventor languishes—posterity builds him a monument. The fuse of a good deed burns slowly and imperceptibly. You may count its tardy flashes. “It is dead!” No, it lives, and its reverberations are heard at the Judgment.

The Cross has *now* more than four attending friends. Heber and Martyn have larger audiences than on the banks of the Ganges, and thousands testify that “the pains of the vicarious benefactor are generally proportioned to the extent or malignity of the evils he labors to remove.”

If this moral force be so efficient, why “toil all the night and take nothing?” Why these wrecks of “splendid efforts,” “exhaustive arguments,” “magnificent plans?” They do not contain the essential moral of true success. The force of the physical, the concentration of the mental, the ingenuity of the human absorb the moral. We employ questionable motives and agencies, forgetting that God accomplishes the greatest results by the smallest instrumentalities, and one word in His name is as the sling of David, the widow’s mite or the publican’s prayer.

And even when the intention is good, we

must "run lawfully" in observing physical, mental and social laws whose infringement brings invariable punishment. Was it mysterious that the young reformer failed when he overtasked his faculties, requiring stimulants destructive of self-control and moral influence?

HEAVENLY ORDER.

"Order is Heaven's first law," and is earth released from the obligation? Bishop Hopkins observes, that "*the love of form and order* is planted by the Deity himself in every man's bosom. For what else occupies the toil and stimulates the ambition of mankind but the exercise of this very principle?" From this tendency we infer the characteristics of heaven. And as the present succeeds the Silurian period, as God prepared man's fuel ages previously, so he also prepares our present probation for "that new world wherein dwelleth righteousness."

That universal adaptation of means to the end cannot fail here. We have now the advancing principles—we must possess hereafter the corresponding mansions. The discoveries of science, recurring seasons, undeviating planets, the cycles of mind and matter point upwards, and though Revelation is quite reticent as to

the essential glories of heaven, the Apocalypse declares dimensions, times, quantities and numerals; the Tree of life transplanted from paradise reproduces monthly fruits, and "its leaves are for the healing of the nations."

Shall we *there* be alternately excited and depressed—our thoughts disturbed by each transient agitation—our days of anticipated joy strangely clouded? The cycles of thought shall, in their beauteous recurrence, as far exceed nature's cycles as the substance its shadow. The dying Hooker fixed his eye on Heaven's order—the angels' calm obedience—and he longed to realize this corrective of earth's perturbations.

The very figures and types which describe heaven are periodic, the river of life, the sea, the tree, the light and the sound, whose undulations are as the tidal wave; and when we read that "there were seven lamps of fire burning before the throne, which are the seven spirits of God," we recollect that light itself is composed of seven colors visibly blended in one emerald bow. If a mountain represents "Jerusalem above," these numerical types and patterns, which we understand, suggest higher periods, which eye hath not seen, and Heaven's choral chant—

“The hymn that rolls its tide
Along the realms of upper day.”

“When the absolute dependence of creatures is thoroughly felt, the beautiful orders of the heavenly Hierarchy, rising and still rising towards perfection, may be seen and admired, without hazard of forgetting Him who alone is absolutely perfect.”

The highest Periodic Law is no materialized cycle, but an infinite range of orbit around God's throne diffusing the greatest happiness. And shall we make no assimilation here? Shall our thoughts, unintelligible to life's close, *then* plunge like rapids into this glory? Such a change has no parallel in the progressive periods of nature, in the cycles of history, in man's growth, physical, mental or moral. This law, like the *beauteous* bow, embraces earth and heaven, the intricacies of thought here and the infinite ranges hereafter; and as we realize its efficiency in the world of nature we shall appreciate its excellency in the Kingdom of Grace.

“My mind to me a kingdom is.”



APPENDIX.

NATURAL AND REVEALED RELIGION. (*Page 14.*)

THE Sabbath is a part of this Periodic Law, the bridal between natural and revealed religion, an evidence new and beautiful; the "*Horæ Paulinæ*" show undesigned coincidences between different parts of Scripture; "*Natural Theology*" discloses benevolent design in animated nature; "*Butler's Analogy*" proves a parallelism between the course of Providence and revealed religion; but the Periodic Law shows that He who commanded the septennial fallow, wrote the same law on the ground ages previously. The exhumed marbles of Nineveh corroborate sacred history, and the unploughed ground of Palestine harmonized with the Jewish statutes. Thus, while the heavens declare the glory of God, the earth showeth His handiwork, and the floods lift up their voice. The beams of science falling on the ground evoke the pauseless chant.

CICADA SEPTENDECIM. (*Page 18.*)

(*From Latrobe's Rambles in North America, 1835.*)

"The observations of a past century had shown the inhabitants of Pennsylvania and Maryland

that every seventeenth year they were visited by countless hordes of the Cicada tribe, (*Septendecim*,) distinct in habits and aspect from those whose annual appearance and mode of life were understood. Though of a different tribe, and with perfectly different habits from the locusts of the East, (*gryllus migratorious*,) the fact of its occasional appearance, as though by magic, in such vast swarms, had caused it to be familiarly alluded to by that name. Its first appearance had been in 1817, and its re-appearance was thus confidently predicted for the third or fourth week in May this year, (1835.) The first appearance in Canada was in May, 1749, and every seventeen years, a few days later until 1817, when they came from 26th of May to the beginning of June.

“Nature, true to her impulses and the laws by which she is so mysteriously governed, did not fail to fulfil the prediction. On the 24th of May, and the following day, the whole surface of the country in and about Philadelphia suddenly teemed with this singular insect. The subject interested me, and as during these days I had opportunity of being hourly attentive to the phenomena, both here and in Maryland, I send you the result of my observations.

“The first day their numbers were comparatively few, the second day they came by myriads; and yet a day or two might pass before they reached their full number. I happened to be abroad the sunny morning, which might be called the day of their birth. At early morning the insect in the pupa state may be observed issuing from the earth in every direction by the help of a set of strongly barbed claws on the fore-legs. Its colour then is of a uniform dull brown, and it

greatly resembles the perfect insect in form except in the absence of wings, ornaments and antennæ. The first impulse of the imperfect insect on detaching itself from its grave is to ascend a few inches or even feet on the trunks of trees, at the foot of which their holes appear in the greatest number, or upon the rail fences, which are soon thickly sprinkled with them. In these positions they straightway fix themselves firmly by their barbed claws. In half an hour you will observe the next change. The shell is split from the back of the head to the rings of the abdomen, and the labor of self-extrication follows. With many a throe the tail and hind legs appear through the rent, then the wings extricate themselves from a little case in the outer shell where they lie exquisitely folded up, but do not yet unfurl themselves, and lastly the head, with its antennæ, disengages itself, and you behold the new born insect freed from its prison. The slough is not disengaged, but remains firmly fixed in the fibres of the wood, and the insect languidly crawling a few inches remains as it were in a doze of wonder. It is rather less than an inch in length, and appears humid and tender; the colours are dull, the eye glazed, the legs feeble, and the wings on opening appear crumpled and unelastic. All this passes before the sun has gained his full strength. As the day advances the colours become more lively, the wings attain their full stretch, the body dries and is braced up for its future little life of activity and enjoyment.

“Between ten and eleven the newly risen tribes begin to tune their instruments; you become conscious of a sound filling the air different from the ordinary ones which may meet your ear. A low,

distinct hum, like the simmering of an enormous caldron, swells imperceptibly, changes its character and becomes fuller and sharper, thousands seem to unite, and at 1 P. M. the whole country rings with the unwonted sound. The insects are now seen lodged in or flying about the foliage above.

“Well may the children rejoice at the sound, for their hands will never want a plaything for many days to come. Well may the birds of the forest rejoice, for this is their season of plenty. The pigs and poultry too, fatten on the innumerable swarms which soon will cover the ground in their declining strength.

“The pretty insect, with its dark body, red eyes and glassy wings, interlaced by bright yellow fibres, enjoys but a little week, and that merry harping from sunrise to sundown continues but six days. Its character would be almost impossible to describe, though I hear its singing every time I think of the insect. The sound produced is a strong vibration of musical chords by internal muscles upon a species of lyre or elastic membrane, covered with net-work and situated under the wings. The female insect may utter a faint sound, but how I do not know. It is the male who is endowed with the means of instrumentation. Though the sound is generally monotonous, as long as the insect is uninterrupted, there is at times a droll variety; but what it expresses, jealousy or some other passion, I cannot say. It is well described by the word *Pha-ro*, the first syllable being long sustained, and connected with the second, pitched nearly an octave lower by a drawling *smorzando* descent.

“The closest attention does not detect their eat-

ing any thing, and excepting the trifling injury occasioned by the female laying her eggs, they are perfectly innoxious. The end of their brief existence above ground is the propagation of their species. In a few days the female begins to lay her eggs. She is furnished with an ovipositor in a sheath on the abdomen, composed of two serrated hard parallel spines, which she works with an alternate perpendicular motion. She selects the outermost twigs and makes longitudinal incisions in the under bark or wood, where she lays rows of tiny eggs. She then crawls up the twig a few inches yet further from the termination, and makes two or three perpendicular cuts into the very pith. Her duty is now over. Both male and female become weak, the former ceases to sing, they pine away, become blind, fall by myriads, and in ten or fifteen days after their first appearance they perish. The perforated twigs die, the first wind breaks and scatters them on the ground. The eggs originate small grubs, which are thus enabled to reach the ground without injury, where they disappear, digging down into the earth. Year after year, summer after summer, the sun shines in vain for them; they "bide their time!" Their existence is forgotten, a generation passes away, the surface of the country is altered, lands are reclaimed, streets laid out and trampled on, houses built and pavements hide the soil.

"Still, though man forgets the locust, God does not. What their interval life is we know not. Traces of them have been found eight or ten feet under ground. When seventeen years have gone, the memory of them returns and they are expected. A cold, wet spring may retard, but

never have they failed to appear. By a common impulse they rise, pierce through the hard clay of pathways, through gravel, between the joints of stones and pavements into the very cellars—like their ancestors—a marvel in the land, to sing their blithe song of enjoyment under the bright sun and amidst the verdant landscape—like them to fulfil the brief duties of their species and close their mysterious existence by death. We are still children in the small measure of our knowledge and comprehension with regard to the phenomena of the natural world.

“We may venture to prophesy the re-appearance of the *Cicada Septendecim* on the coasts of Maryland and Virginia for the year 1851. I ascertained that all these insects sung in one musical key, C. sharp, (terminating in B. flat.)”

This interesting account by Mr. Latrobe has been abundantly verified by my own observation. Residing at Princeton, N. J., in 1834, I remember the woods and orchards surrounding the college swarming with the risen Cicada, and vocal with their song. In 1851, residing near the Eastern Fountain, Baltimore, I found the same peculiarities noticed previously. And now, from my window overlooking the Park, I notice the children chasing the flying locusts, and the streets filled with the remarkable monotone. Their appearance was about the first of June, 1868, and missing the elm trees, which were cut down in 1862, they collected on the few remaining poplars. Their song dirge was about June 20th. Connected with the uniform note mentioned by Mr. Latrobe, I remarked a very sharp occasional tone, which probably escaped his observation.

The appearance of this insect must be interest-

ing to many others besides the naturalist. Their localization on this continent; their long hibernation and preservation several feet under ground; their simultaneous departure and re-appearance; their very short stay after seventeen years preparation; their short uniform song, and their peculiarity of laying eggs; the events which have occurred since, and will occur before 1885, all these invest the Cicada with mystery. We ask, "why this waste; such complicated design and results so disproportionate; seventeen years absorbed in a week's song?" We think deeper and again ask, "may not these insects be sent to teach us truths long buried like themselves; a resurrection of laws almost forgotten; harmonies which declare the glory of God, not for a life week, but pauseless as eternity?"

THE LOCUSTS.

[From the *Baltimore Sun*, June 18, 1868.]

In the advance sheets of a work on "Periodic Law," by Rev. Geo. A. Leakin, A. M., Baltimore, now being published, we find in the appendix an interesting extract on the subject of the seventeen-year locusts, from "Latrobe's Rambles in North America, in 1835," generally confirmatory of the facts mentioned in *The Sun* yesterday in connection with the admirable and exhaustive work of the late Dr. G. B. Smith. It may here be remarked, that the singular fact stated by Dr. Smith that the locust leads an entirely solitary life (except in times of mating) is confirmed by the observations of a correspondent, who has given considerable attention to this extraordinary insect. There is also an additional fact mentioned

by Mr. Latrobe, that the first appearance of the locusts in Canada was in May, 1749. His description of the peculiar song of the newly risen tribes is graphic.

In the forthcoming work, in which the universality of the Periodic Law is set forth in a most interesting manner, the application of the law to locusts seems appropriate, those insects which disappear and appear again at the end of seventeen years, only to sing a short, glad song, and then perish.

SPIRITUAL INSIGHT. (*Page 38.*)

The ancients had mechanical appliances unknown to us, and to this day the construction of the Pyramids, the transportation of the immense stones from distant quarries, and their elevation to such a height, surprise the modern engineer. But may there not have been a *moral* science, the product of close observation and great purity of character, by which one might anticipate the years of famine, and provide abundantly in the years of plenty?

Professor Huxley observes that, "the great deeds of philosophers have been less the fruit of their intellect than the direction of that intellect by an eminently religious tone of mind."

SPIRITUAL LAWS. (*Page 41.*)

The object of Farrar's sermons is to show how we can give the certainty of science to the facts of religious experience.

"When we ask whether the religious life is subject to laws, the analogy of the whole of

God's government, both moral and spiritual, would suggest the presumption that the spiritual also must be directed according to a system of laws either discoverable or inscrutable, that it might excite surprise why we should ask the question."

"There is a world of life and of thought of which we detect the traces but cannot understand the nature. And thus far, accordingly, the spiritual life, be it regarded as intellectual or emotional, is supernatural; but we must be careful, on the other hand, not to disconnect the spiritual life from the human mind, nor to isolate it entirely from the ordinary facts of mental and emotional science. And in this respect Bishop Butler's sermons will always have such immense value. There may be possibly in them a slight defect in direct recognition of the life spiritual; but, with this exception, we cannot too closely study the method in which he shows that even the deepest feelings, such as the love of God, are compatible with human nature. It was the dispute which had been opened in France shortly before his day by the mysticism of Quietism which led him to see that such a reconciliation of the supernatural and natural was possible; and who among us does not feel what a reality it would give to many a discourse on spiritual subjects in the present day, if the minds of preachers were imbued with the common sense, with the science of the bishop's writings?"

If a natural history of *Enthusiasm* be practicable, why not a similar history of that spiritual life of which enthusiasm is a development?

The truths mentioned by Farrar are especially important to all who deal with spiritual interests

—the hidden springs of conduct. They will see that to avoid spiritual malpractice they must have some knowledge of that interior world on which they work; and is it objected that the Holy Spirit is a substitute for this wisdom, that His motions are undiscernible as the wind? This objection would not apply in regions where the wind blows with undeviating regularity.

The Holy Spirit acts agreeably with man's internal constitution as with external providence; and if Bezaleel is authorized to construct the Tabernacle, he is not warranted in disregarding the laws impressed on timber and stone; and can the laws of the immortal temple be slighted with impunity?

The bee-taker, serpent-charmer, horse-tamer, understand the constitution of these respective animals, and hence their success. The restlessness of childhood is an indispensable probation, and if parents continually interfere with this vivacity they will weaken in so doing all judicious control; and thus if the minister adapt not his instructions to the varying phases of the human mind, he will resemble the empiric who prescribed one remedy for every disease, or, which is perhaps worse, substitute terror for comfort, or speak peace where there is no peace. The lapidary in cutting the diamond transversely destroyed its value.

Says Alexander on religious experience: "The spiritual physician who has the cure of diseased souls takes much less pains to inquire minutely and exactly into the maladies of his patients than is observable in physicians of the body. The patience and ingenuity with which men of the medical profession make experiments repulsive

to our natural feelings, is highly commendable and worthy of imitation. Many of our young preachers, when they go forth on their important errand, are poorly qualified to direct the doubting conscience or to administer safe consolation to those troubled in spirit."

Nor must we go far to gain this knowledge, as by a beautiful law the faithful performance of duties promotes the highest improvement of our faculties; and it should never be forgotten that, in either giving or receiving instruction, a single idea incorporated in action is worth more than all external influences combined; nay, such superfluity becomes to the mere recipient a positive injury.

Foster inquires, "why the Gospel has such little hold on educated men?" Not because wanting in highest adaptation, but because of a misapplication of its truths. Men say, "there is no correspondence between the instruction we hear and our internal constitution, and if you are mistaken in earthly things we know, how can we receive the heavenly things you declare?"

True religion never produces but mitigates insanity. It gives a right judgment in all things, substituting certainty for those doubts which so abound, and guarding equally against a reliance on mere externals and transitory emotions.

Did the mind consist of memory alone, we should study its wonderful ranges; but when it comprises reason, affection, will, reacting on each other, how assiduously should we seek this knowledge?

The following lines of S. T. Coleridge on Education will equally apply to all spiritual training:

LOVE, HOPE AND PATIENCE.

“O’er wayward childhood wouldst thou hold firm rule,
And sun thee in the light of happy faces ;
Love, Hope and Patience, these must be thy graces,
And in thine own heart let them first keep school.

For as old Atlas on his broad neck places
Heaven’s starry globe, and there sustains it—so

Do these upbear the little world below
Of Education—Patience, Love and Hope.

Methinks, I see them grouped, in seemly show,
The straightened arms upraised, the palms aslope,
And robes that touching as adown they flow,
Distinctly blend, like snow embossed in snow.

O part them never ! If Hope prostrate lie,

Love too will sink and die.

But Love is subtle, and doth proof derive

From her own life that Hope is yet alive ;

And bending o’er with soul-transfusing eyes,

And the soft murmurs of the mother dove,

Woos back the fleeting spirit and half supplies—

Thus Love repays to Hope what Hope first gave to Love.

Yet haply there will come a weary day,

When overtasked at length

Both Love and Hope beneath the load give way,

Then with a statue’s smile, a statue’s strength,

Stands the mute sister, Patience, nothing loth,

And both supporting does the work of both.”

We desire especially to commend these admirable lines to our readers. As a poem of its kind, it is well-nigh perfect, both in the conception and the execution. It is philosophy, sentiment, beauty, blended into one by the harmonious power of the imagination. As a study of poetical art, it requires, as all poetry of a high order, thoughtful and imaginative reading ; and the power and beauty of it will reveal themselves on repeated perusal. It is, too, by virtue of its excellence as poetry, a moral as well as

poetic study. Never by hand of heathen artist—sculptor or poet—never in marble or in pictured words, were Aglaia, Euphrosyne and Thalia shown in group more graceful, or attitude so august as these three Christian Gracès. They are imaged, not like Atlas stooping with bent neck beneath the “starry globe,” but erect. “The straightened arms upraised, the palms aslope,” upbearing their burden. They stand, not like the nude pagan divinities, but draped with Christian modesty, the robes blending like “snow embossed in snow.” This stationary beauty of sculpture changes to other imagery, to symbolize the course of the moral sentiments which are attendant on education. Hope is the first to faint, and the life of Love is so linked with hers, that if Hope fail, “Love too will sink and die.” There is a fine philosophy of the affections shown in the lines which tell of the subtle process by which Love finds in her own life the proof that Hope is not dead; and then the peculiar power of the imagination creates that second exquisite group—Love, “with soul-transfusing eyes,” bending over the fainting form of Hope and wooing her spirit back again. Last of all in this drama of education, you behold the third group—as beautiful and more awful—where Love and Hope, losing heart, would sink beneath the load, but that “the mute sister, Patience,” stands “with a statue’s smile, a statue’s strength”—and “both supporting does the work of both.”

This poem resembles in its philosophical vein the productions of some of the early English poets, but is superior to them in the better proportions of the poetic and philosophical ele-

ments—in the mastery which the imagination sustains over the metaphysical power. With all who know how to recognise and welcome Truth embodied in poetic creations, and arrayed in poetic garb—with all who look on poetry as a *study*, the poem, we are confident, will find favor. Especially may it be taken to heart by all who in any way have a duty of education—who, having to rule over “wayward childhood,” are fain to look at the same time upon “the light of happy faces.” The mother, in whose undying instincts towards her child the three Graces of education have the truest and most beautiful life—the school-mistress, ruling restless childhood—the teacher, who governs unruly boyhood, or guides early manhood—all are made to feel that Hope often sinks sadly down, and Love alone can win her fainting spirit back, and lastly, how Patience must needs do the all-sustaining work, when her two sorrowing sisters are drooping at her side. Not only for those who are charged with the education of youth is this apologue significant; it comes home to those, whose sacred function it is to lead their fellow-beings of every age—the old as well as the young—in the paths of righteousness and truth; and they who teach from the pulpit and from the altar-side have full cause to feel the need of the gracious presence of Love, Hope and Patience.—*The Register.*

SCRIPTURAL COINCIDENCES. (*Page 43.*)

Prideaux observes, that “when Christ came to Nazareth, his own city, he was called as a member of that synagogue to read the Haphterah, that is, the section or lesson out of the Prophets which was to be read that day, and when he stood up and read he sat down and expounded it, as was the usage of the Jews in both cases. If any one will turn to that lesson he will see the force of Christ’s comment, ‘This *day* is this scripture fulfilled in your ears.’

“We remember, many years ago, to have been quite startled by the wonderful appropriateness of one of the Sunday lessons, to the peculiar circumstances of the congregation then assembled in a village church. It was the seventh Sunday after Trinity, a warm August morning, when an attached people met in the Lord’s house to listen to their dear pastor’s parting counsel. A stranger read the service. The second lesson was the 20th chapter of Acts. If my readers will refer to it, they will not be surprised that the worthy clergyman who was then to bid farewell to his people was dissolved in tears during the reading of the lesson, and that all present were greatly moved.

“I have been reminded of this by one paragraph in the *London Quarterly Review* for October, 1859, in the able article on the ‘Geography and Biography of the Old Testament.’ It is as follows: ‘Travellers are sometimes fortunate in unexpected coincidences. We, ourselves, well remember the pleasure with which, on a first Sunday in Athens, we heard the seventeenth

chapter of the Acts read in the English Church, and went after service to read it again in solitude on the Areopagus. Professor Stanley tells us, in a recently published volume of sermons, that he was at the convent of Mount Sinai on a Sunday when the fourth chapter of Galatians was the epistle for the day; and he did not fail to preach accordingly. A friend, just returned from Palestine, has described to us a startling moment in the early morning, in a ride from Jerusalem by Bethlehem to Jaffa, when the sun rose over Gibeon and the moon was full before him over the valley of Ajalon.'

"We cannot forbear adding to these two or three other examples, which will not fail to be interesting. When Archbishop Laud was accused of high treason, and, for the last time, attended evening prayer in the chapel at Lambeth, every word of the Psalms appointed for the day (the 93d and 94th) spoke comfort, while the voice of the prophet, in the Old Testament lesson (Isaiah, 50th chap.) had its own message. St. Peter seemed to speak to the afflicted prelate in the second lesson, (2 Epis. i.,) and to remind him that he must shortly put off his tabernacle."

"Another of these coincidences occurred in the days of the second King James, when the seven bishops were sent to the tower in such a summary way. Macaulay thus refers to it: 'On the evening of the black Friday, as it was called, on which they were committed, they reached their prison just at the hour of divine service. They instantly hastened to the chapel. It chanced that in the second lesson were these words: 'In all things approving ourselves as the ministers of God, in much patience, in afflictions, in distresses,

in stripes, in imprisonment.' All zealous Churchmen were delighted by this coincidence, and remembered how much comfort a similar coincidence had given, near forty years before, to Charles the First at the time of his death.'— [*Macaulay's England*, vol. ii., p. 338.]

"The only other instance which we have time to give, is that relating to the first prayer in Congress. On the 7th of September, 1774, by invitation of that body, the Rev. Mr. Duché, the Rector of St. Peter's Church, Philadelphia, officiated in Congress Hall, his clerk making the responses in the service. The next day, John Adams writes an account of this interesting circumstance to his wife. The Psalter for the day beginning with the 35th Psalm, sent a thrill through the whole Assembly. 'You must remember,' says Mr. Adams, 'this was the next morning after we had heard the rumor of the horrible cannonade of Boston. *It seemed as if Heaven had ordained that Psalm to be read on that morning.*'"

DE TOCQUEVILLE ON AMERICAN DEMOCRACY.

(Page 62.)

De Tocqueville observes: "Whithersoever we turn our eyes, we perceive the same revolution going on throughout the Christian world. The various occurrences of national existence have every where turned to the advantage of Democracy. All men have aided it by their exertions, both those who have intentionally labored in its cause, and those who have served it unwittingly; those who have fought for it, and those

who have declared themselves its opponents, have all been driven along in the same track, have all labored to one end; some ignorantly and some unwillingly, all have been blind instruments in the hand of God."

When this principle has reached its highest political development, what then? It is absorbed as the river by the sea in that Kingdom "where there is neither Greek nor Jew, circumcision nor uncircumcision, Barbarian, Scythian, bond nor free." "The kingdom of God is not, in fact, a figurative expression, but most literal; it is rather the earthly kings that are figures and shadows of the true." Christ came to raise the degraded and reunite all nations, and the cycle of His presence will again appear, when the immortality of the humblest is vindicated, and commerce is as free as the winds that fill its sails.

PERSONAL REPETITIONS. (*Page 64.*)

Grindon on the law of Rejuvenescence observes: "Ideas never die. Out of fashion for awhile; lost, perhaps, for generations, they bide their time." They revive, as Ovid says, "*in nova corpora mutata.*" No fragment of truth is ever lost. Immortal as its origin, every particle is sure to rise again; its resurrection the result of its immortality. All the great "Revivals" of the present age partake of this character, and result from this mighty law; let us be careful how we ridicule the least of them. Resuscitation can only happen where there is life; the absurdity may prove to be in ourselves rather than in the things. What the many are, such is

the individual. The parallel is exact between the soul of man and that of society. "Every man," says Sir Thomas Browne, "is not only himself; there have been many Diogeneses and many Timons, though but few of the name. Men are lived over again; the world is now as in ages past; there was none then, but there has been some one since that parallels him, and is as it were his revived self."

LEGENDA OF ST. VALENTINE. (Page 69.)

In ancient Rome, the feast of Lupercalia, in honor of Pan, was observed with much zest. At this heathen celebration young men and maidens met each other from home. St. Valentine knowing the difficulty of abolishing the festival, determined to give it a more suitable turn, and he so far succeeded that young persons did not meet on that day except by the letter carriers, and "The Pagan shrine was let for building ground."

Cannot another improvement be made? Why not appropriate this day to returning *borrowed books*? A deep thinker remarks that "many duties are not performed because no time is set for their performance," and St. Valentine's day would require but a slight turn for a very desirable observance.

In the Chinese empire, all debts must be paid on their New-year day, in default of which the store is closed until payment be made. The introduction of such an arrangement is not suited to our Western civilization, and we must therefore wait the circling progress of Chinese ideas; but in the mean time a beginning might be made in the way of *proper book-keeping*.

SIMULTANEOUSNESS. (*Page 74.*)

“Leaves have their time to fall,”—the autumn of the year, but is there not a deeper meaning? While passing under an ailanthus tree on a calm June day I was surprised to see the leaves falling, and concluded that it was from some local cause, but I ascertained that this decadence was general, as though in different streets an electric wire conveyed an order to each tree. Whatever the cause, the fact suggests that simultaneous law which pervades the vegetable and animal world, and especially classes of society, as the members of one body.

EMOTIONS.

(*From the Philadelphia Ledger, May 29, 1867.*)

The Maryland *Educational Journal*, which is the organ of the State Board of Education, and is well edited, in a late number calls attention to a treatise on “The Periodicity of Mental and Moral Emotions, by Rev. Geo. A. Leakin, A. M., Trinity Church, Baltimore.” The idea is that thought revolves, as well as matter. There is progress, no doubt, as the great underlying law of all things, but it is spiral rather than straightforward. We all know something of the law of storms, and by the aid of the electric telegraph and the comparison of log books have a very good notion now of the direction in which storms are circulating and the rate at which they are travelling. A terrible gale will come puffing and blowing around Cape Hatteras, from the northeast, perhaps, but the whole storm will be

creeping up the coast from the southwest ; and an experienced sea king, like Sir James Anderson, of the Great Eastern, will, in a few minutes, furnish in his own mind a complete map of the whole storm, and know how to steer his vessel, so as to catch the least of it, or to make it help on his purposed voyage, instead of destroying his ship.

We all know something of the law of storms, or periodicity, in commercial matters. There are flush times when money is abundant, and credit safe and universal, and then come storms of panic, that seem about to shake and batter the firmest fortunes to pieces. Some have thought, or tried to think, the whole matter uncontrollable and unaccountable ; others look out for signs and prognostics. But there are others who further attempt to trace out the tendency to periodicity and the law of these commercial storms, and even to reduce it to analogy with a similar law traced out by Guizot, as belonging to philosophy and the operations of the mind generally. We all know the eclectic division of philosophies into the sensational, ideal, skeptical, mystical, eclectic ; and corresponding with these there are in commerce, first, sensational times, when ready money answers all things, and gold and silver, without paper or credit, governs all things most solidly. Then comes the ideal period of credit and inflation, producing, at last, naturally and necessarily, a skeptical season of panic, in which all credits, good and bad, are shaken, so that those only which are solid may remain ; by degrees an eclectic system of reconstruction sifts out the good from the bad, on a solid basis, at first, but

to go through the same cycle on a larger scale and with new and more extended sweep.

There is a law of periodicity in *political* affairs—"a tide in the affairs of men, which, taken in the ebb, flows on to fortune"—a time of action and reaction in political ideas—a time of war and a time of peace. When matters were simplest, and governed almost entirely by material considerations, the changing seasons fixed this greatly, and the spring was "the time when kings went forth to war," just as now in Africa there is the fixed and regular season when the tribes go out on their annual slave hunt. As man becomes more an intellectual and moral being, immaterial causes prevail more over physical, but the laws of man's being are not changed.

Even in literature, and especially poetry, this law of periodicity is readily traceable. As the irregular, passionate, but sensational and sensual poetry of Byron was a natural reaction from the euphonious smoothness and supposed classic regularity of Pope and his contemporaries; so, having run through the cycle in which Coleridge's gentler and Wordsworth's tamer lines have had their sway, and reduced most of English poetry to sad idealistic verse, we have the bold, daring, sensual, skeptical, but intense and commanding attacks of Swinburne upon what all think most sacred in poetry and life—a writer justly, though too hopefully and favorably, treated in the last *Westminster Review*.

We are pleased to see that Rev. Mr. Leakin has applied some features of this law to education and the domestic history of each family, the fluctuations of colleges, congregations and political parties, mental and moral contagions, &c.

“The ascending dew, borne by the wind, is condensed upon the mountains, trickles down the glad valleys, and returns to deepen and clarify the very lake whence it emanated—an invisible cycle for ages undetected; and so the extension of periodicity into a new field elevates the common laws of life and discovers relationship hitherto unknown.” The practical usefulness of this sort of study is well illustrated thus: “A worthy teacher of large experience stated that in every eight years his school became so reduced as to threaten its failure, but by steady continuance its prosperity as regularly returned. How encouraging this law is to every one depending upon numbers for support! Every business or profession is held by two opposing forces, and it approximates or recedes from its central sun, thus giving the alternations of summer and winter.” If religious congregations were more patient and less eager for a change of pastors in seasons of natural reaction from over-excitement, and more moderate in those excitements, it might be better for all.



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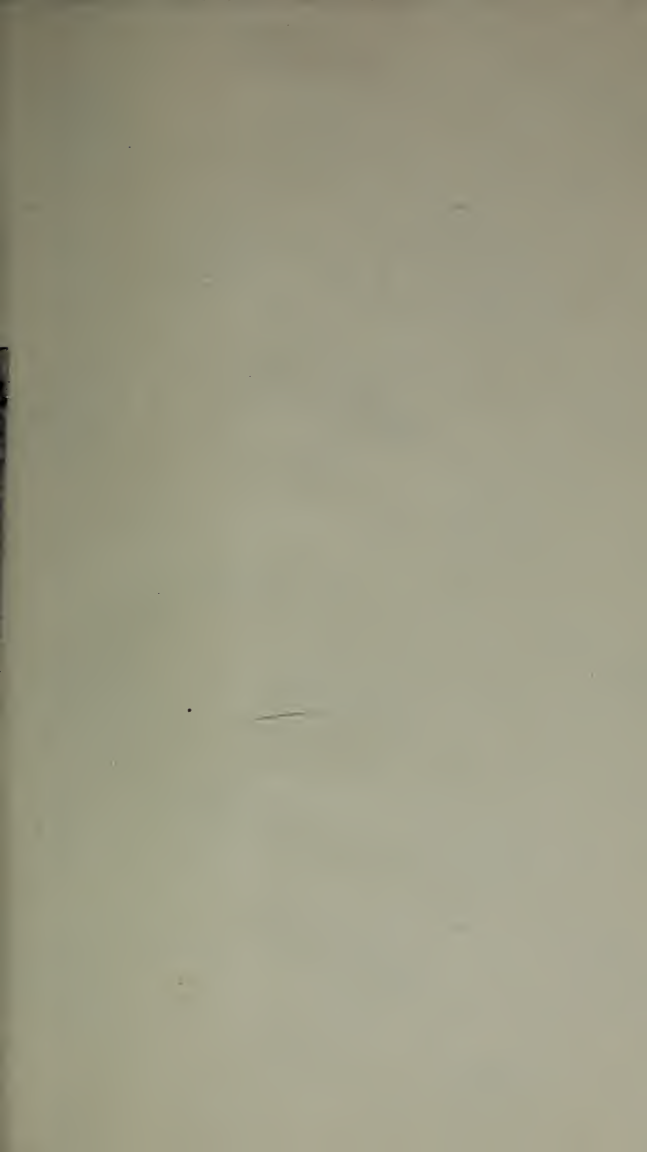
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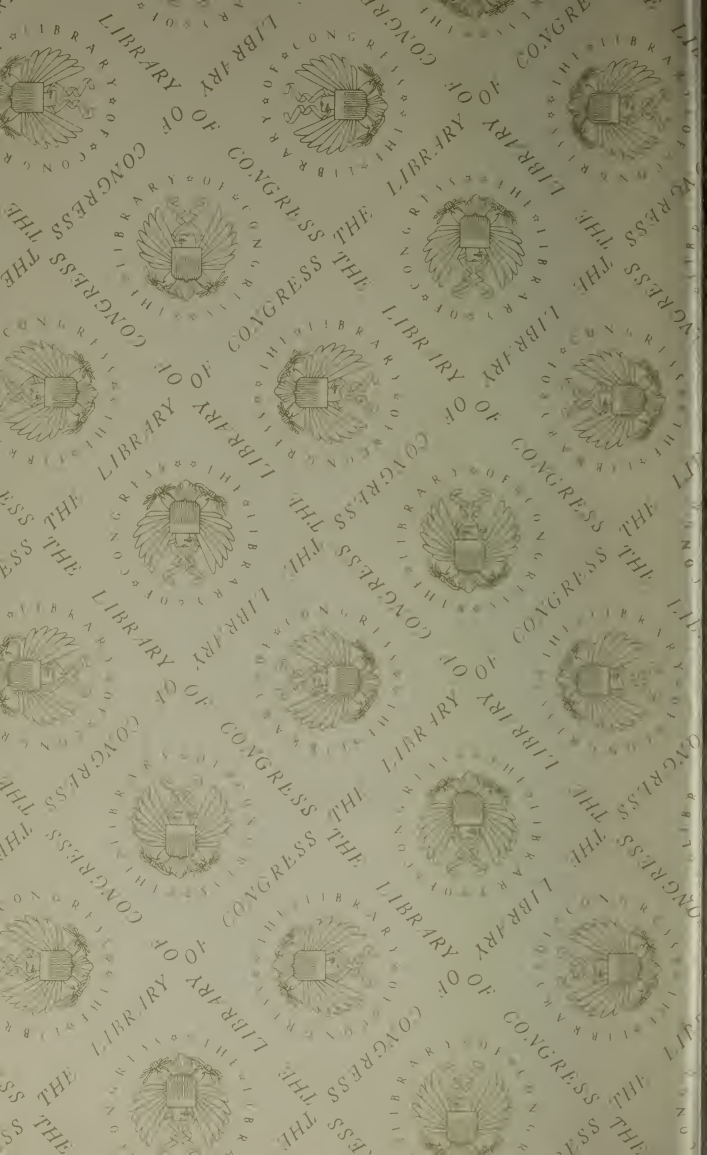
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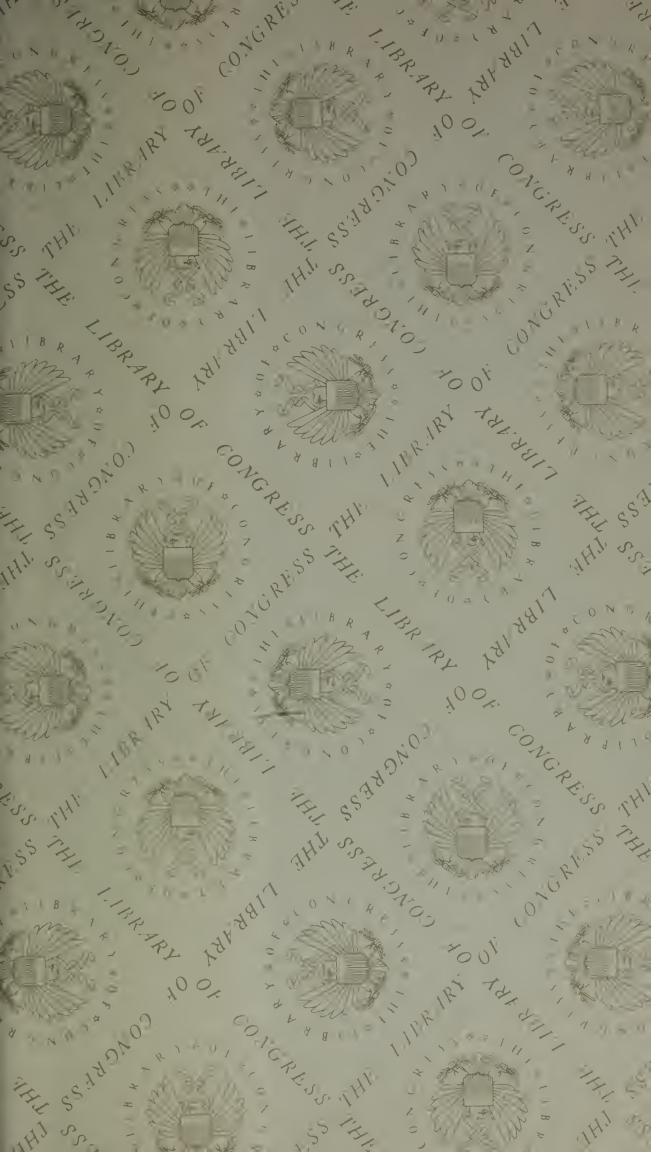
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